



EVIS
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14th Annual Meeting of TSIR and EVIS 2019

International Joint Meeting

April 19 - 23 , 2019 / Hilton Bosphorus Congress Center, Istanbul - Turkey
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ABSTRACT BOOK

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Vascular interventional Radiology

FP – 01

Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 08:30:00

Publication End Date: 2019-04-23 08:37:00

TREATMENT OF FEMOROPOPLITEAL PERIPHERAL ARTERIAL DISEASE WITH SUPERA STENT AFTER SUBINTIMAL OR INTRALUMINAL RECANALIZATION: MID-TERM RESULTS

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Aim: To evaluate the efficacy and safety of the Supera stent (Abbott Vascular, Santa Clara, Calif) for revascularizing Trans-Atlantic Intersociety Consensus (TASC) type B–D lesions at superficial femoral and popliteal arteries.

Material and Methods: This retrospective study included 21 patients (mean age = 74.2±10.3 years) treated with 32 stents by a single experienced operator for peripheral artery disease (TASC type B: 23.8%, TASC type C: 61.9% and TASC type D: 14.3%) between September 2015 and May 2017. Patients' charts were reviewed for lesion localization, type of revascularization, lesion length, follow-up period, smoking status, the presence of diabetes, and patency of the stent. Patients were followed-up for patency of stent after the procedure with clinical assessment, if necessary, color Doppler ultrasonography and catheter angiography. Primary patency rates of the stents and factors associated with re-occlusion were analyzed with Kaplan-Meier analysis.

Results: All procedures were technically successful without any peri-procedural or post-procedural complications. Ten patients were treated subintimally and 11 patients were treated intraluminally. Lesions were located in the superficial femoral (n = 10) and femoropopliteal (n=11) arteries. Mean lesion length was 17.1±7.5 cm. Primary patency rates at 6, 12 and 18 months were 90%, 83.6% and 73.1% respectively. No stent fracture was observed within the follow-up period. Smoking status, the presence of diabetes, lesion localization and recanalization type were not associated with stent re-occlusion.

Conclusion: Using Supera stent appears to be safe and effective for femoropopliteal arterial disease with satisfactory patency on 18 months follow-up.

Non-Vascular interventional Radiology

FP - 02

Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 08:37:00

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LIVER PARENCHYMA BIOPSIES; COAXIAL SYSTEM 18G TRUCUT NEEDLE USING TO OBTAIN ADEQUATE PORTAL AREA FOR PATHOLOGICAL EVALUATION

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¹Hatay Mustafa Kemal University, Interventional Radiology

Objective: In this study, we aimed to compare the complications, the number of obtained portal sites and pathological adequacy of liver parenchymal biopsy procedures, which was used to obtain one material with 16G trucut needle and which was used to obtain two materials with a coaxial needle-guided 18G trucut needle in patients with chronic viral hepatitis.

Methods: Two different liver parenchymal biopsy methods were compared retrospectively in this study. In the first patient group, one material was received with 16G trucut needle, and in the second patient group, two materials were received with coaxial needle-guided 18G trucut needle. There were 53 patients in the first group and 59 patients in the second group. The mean age of the patients was 44.6, 86 of them were chronic hepatitis B and 26 of them were chronic hepatitis C patients.

Results: There was no major complication in both groups. Minor complications were observed in 16 patients in the first group and in 15 patients in the second group. There were no statistically significant differences in terms of complications. The mean number of portal sites were 7.84(3-12) in the first group and 12.25(6-24) in the second group. In the first group, pathological evaluation could not be performed in 3 patients because of inadequate portal area number which was included materials and in the second group pathological evaluation could be performed in all patients. Statistically significant differences were not found between groups in terms of pathological adequacy. But significant statistical differences were found in favor of the second group in terms of the number of portal sites.

Conclusion: We recommend liver parenchymal biopsy procedure which was used to obtain two materials with a coaxial needle-guided 18G trucut needle in patients with chronic viral hepatitis because of significant statistical differences found in mean portal sites which have importance necroinflammatory scoring and fibrosis staging although there were not significant statistical differences in terms of complications and pathological adequacy. And the literature states that the most important factor for pathological adequacy about liver biopsies is the number of portal sites obtained.

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Figure:

Description of the Figure: number of portal areas

Number of portal areas				
	Ort. \pm SS	Median	Minimum	Maximum
16G	7,84 \pm 2,10	8,00	3,00	12,00
18G	12,25 \pm 5,10	11,00	6,00	24,00
Total	10,16 \pm 4,53	9,00	3,00	24,00

Table 1. Number of portal areas

Non-Vascular interventional Radiology

FP - 03

Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 08:44:00

Publication End Date: 2019-04-23 08:51:00

EVALUATION OF DOUBLE J STENT EFFICACY IN PATIENTS WITH URINARY DIVERSION

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Purpose: Evaluation of efficacy and primary patency of antegrade Double J stents in patients with urinary diversion due to pelvic malignancies.

Material and Methods: Between January 2006 and November 2018, we retrospectively evaluated the archived images and laboratory data of 23 patients over 18 years of age who had antegrade Double J stent placement following urinary diversion due to their pelvic malignancies. In cases where the Double J stent could not be navigated to the distal segment of the stenosis, balloon dilatation was performed prior to stent placement. The primary malignancies of the patients, the characteristics of the balloons used during the procedure, the preoperative creatinine and glomerular filtration rate (GFR) values in the 1st and 3rd months, the primary patency duration of the 8F Double J stents and the side of the procedure were recorded.

Results: There were 23 patients (6 female and 17 male) with a median age of 61,9 years (range, 48 years to 72 years). A total of 28 sessions of interventional procedures were performed to patients diagnosed with bladder (n:19), ovarian (n:2), prostate (n:1) and rectal cancer (n:1). 5 patients were not included because of unsuccessful interventions. None of the patients had any complications. 9 patients had bilateral stents and 9 patients had unilateral stents. In 12 of 23 successful procedures, balloon dilatation was not required for anastomotic stenosis. Since the procedure was recently performed in 2 patients and the other 3 patients were lost to follow up, statistical evaluation could not be applied. The mean duration of primary patency of the stents in 18 patients was 19.95 weeks. The mean preoperative creatinine level was 1.61 mg / dl, postoperative creatinine value was 1.45 mg / dl and 1.52 mg / dl for the postoperative 1st and 3rd month, respectively. The mean GFR was 54 ml / min in the preoperative period, 58 ml / min and 56 ml / min in the postoperative 1st and 3rd month, respectively.

Conclusion: In our study, the prolonged primary patency duration of successful procedures with no complication emphasized the value of antegrade Double J stent placement in the treatment of the ureter-ileal loop anastomosis strictures after ileal diversion. Antegrade placed double J stents also protect kidney functions in these patient group.

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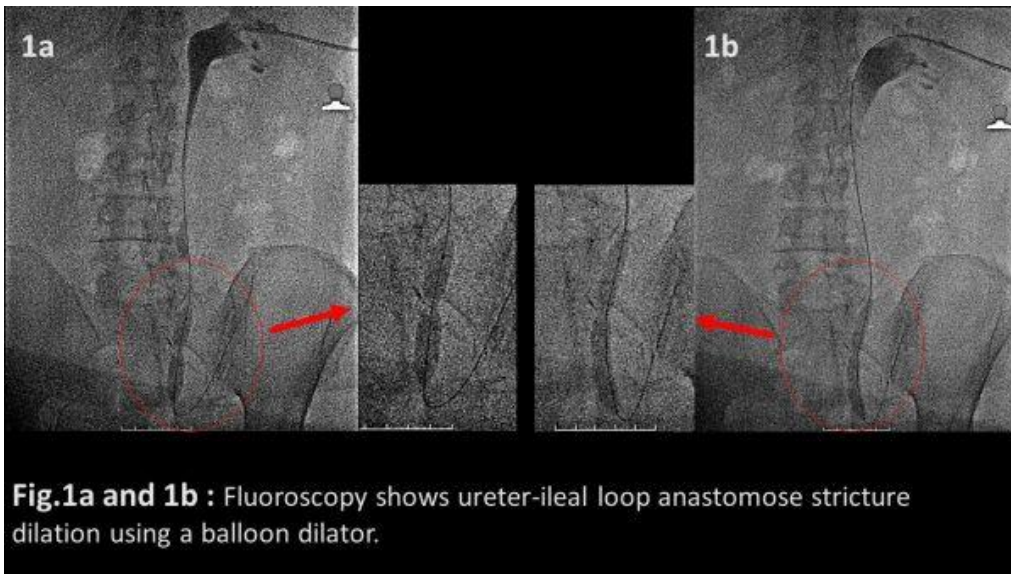
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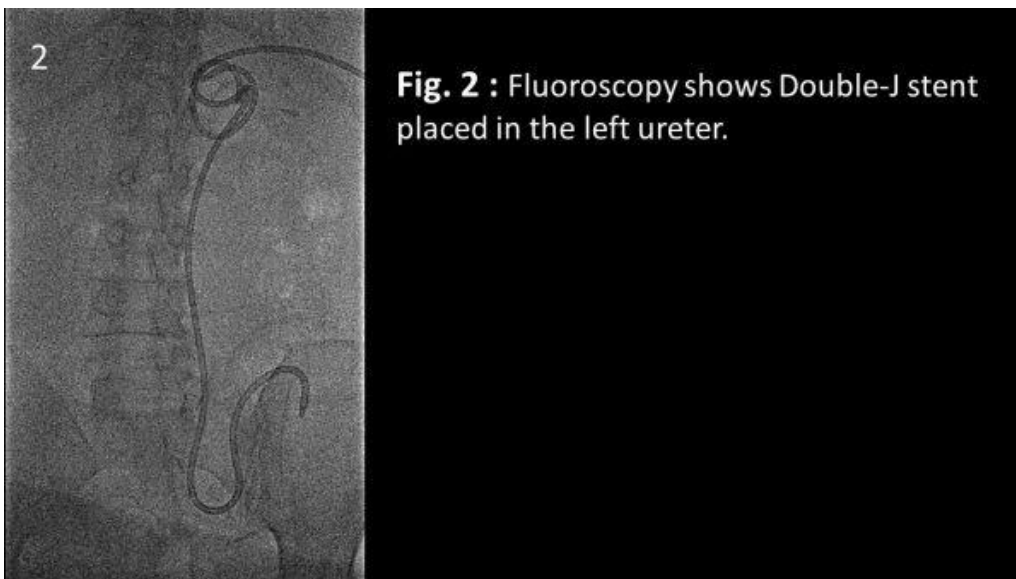
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Figure:

Description of the Figure: Fig.1a and 1b



Description of the Figure: Fig. 2



Vascular interventional Radiology

FP - 04

Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 08:51:00

Publication End Date: 2019-04-23 08:58:00

COMPARISON BETWEEN NATIVE SUPERFICIAL FEMORAL ARTERY AND BYPASS GRAFT INTERVENTION AFTER TOTAL OCCLUSION OF FEMOROPOPLITEAL BYPASS GRAFT: A RETROSPECTIVE STUDY

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Objective: The study aimed to compare the feasibility, safety and outcome of endovascular recanalization of native superficial femoral artery (SFA) or femoropopliteal bypass (BP) graft in patients with critical limb ischemia (CLI) after bypass graft failure.

Material and Methods: A total of 24 limbs in 23 patients with total occluded SFA after failed femoropopliteal bypass graft underwent endovascular recanalization of the native SFA or BP graft from 2015 to 2018 were analyzed. Ten BP graft and 13 SFA endovascular recanalization were performed. Patients were predominantly men (65.2%) and average mean age 68 years (range, 50-88 years). According to the Trans Atlantic Inter-Society Consensus for the Management of Peripheral Arterial Disease classification, all of the lesions were category D.

All patients were considered poor candidates for a redo bypass surgery due to comorbidities (comorbidities listed in Table I) and lack distal run-off below the knee arteries. All procedure managed by retrograde puncture of contralateral CFA in addition two patients had retrograde popliteal artery puncture, one patient had posterior tibial artery puncture, one patient had directly graft puncture and one patient had directly occluded superficial femoral artery puncture performed when failed contralateral retrograde approach. In all cases firstly native SFA recanalization was attempted if failed attempts, BP graft recanalization was performed. Thrombolytic treatment was applied during the procedure in 7 patient BP graft group and 1 patient in the native SFA group due to immediate development of thrombus. Three patients in the BP graft group tPA was given (rate of 1 mg/h for 16 hours) and reintervention performed the next day. In both groups, PTA was performed with balloons and stents were placed in cases of flow limiting dissection and/or more than 30 % residual stenosis after PTA.

Results: The technical success rate was 96% (23/24 limbs). In successful interventions; BP graft group, primary and secondary patency rates at 12 months were 40% and 50 %, respectively. Limb salvage rates at 12 months were 80%. In native SFA recanalization group, primary and secondary patency rates at 12 months were 69% and 100 %, respectively. Limb salvage rates at 12 months were 100%, respectively.

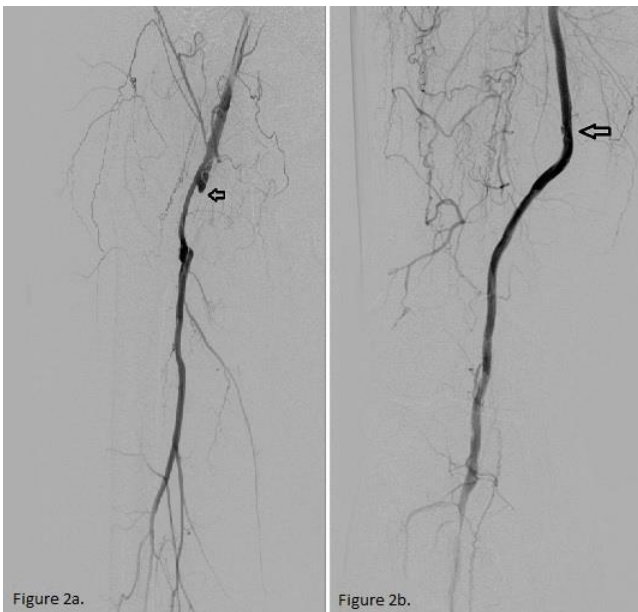
Conclusion: Treatment of lower extremity bypass graft occlusion had challenge management and endovascular recanalization seemed to be a reasonable alternative. A high technical success rate (96%, 23/24) and the ability of recanalization of the knee arteries during the procedure could be achieved which was comparable to surgical options. In conclusion, native SFA recanalization should be firstly attempted in CLI patients cause of higher patency

Figure:

Description of the Figure: Figure 1a,b: Total occlusion of Femopopliteal graft and SFA (Figure 1a), After recanalization of SFA (Figure 1b).



Description of the Figure: Figure 2a, b: Total occlusion of Femopopliteal graft and SFA (Figure 2a), After recanalization of Femoropopliteal graft (Figure 2b).



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Tables:

TABLE 1 Patient demographics

Variables	No. or Mean +SD	% or Range
Gender		
Men	15	65,2
Woman	8	34,8
Age	68±8,5	44-80
Comorbidities		
Diabetes mellitus	17	70
Insulin use	8	33,3
Hyperlipidaemia	18	75
Current smoking	14	58,3
Smokin history	10	41,7
Coronery artery disease	13	54,2
Hypertansion	15	62,5
Chronic renal disease	5	20,8

Vascular interventional Radiology

FP - 05

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LACK OF STRUCTURAL SUPPORT FROM SAPHENOUS COMPARTMENT CONNECTIVE TISSUE AS A POTENTIAL CONTRIBUTING FACTOR IN VENOUS INSUFFICIENCY: A STUDY OF INTRACOMPARTMENTAL ULTRASOUND SHEAR-WAVE ELASTOGRAPHY

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Purpose: Proper greater saphenous vein (GSV) courses within saphenous compartment, an adipose-filled potential space bound by saphenous and muscular fasciae and extending from inguinal ligament to dorsomedial aspect of foot. Ultrasound shear-wave elastography provides objective and quantitative data regarding tissue elasticity, stiffness and compressive strength. This study aims to analyze any possible association between GSV insufficiency and elasticity measurements of connective tissue within saphenous compartment.

Materials and Methods: Two-hundred consecutive adult patients, ages 22 to 81 with a mean of 44.3 years, presenting with symptoms of lower extremity venous insufficiency were examined with Doppler ultrasound for venous insufficiency. Elasticity of saphenous intracompartmental connective tissue at thigh level was measured in all patients using ultrasound shear-wave elastography. Analyses regarding patient age, gender, presence of venous insufficiency of GSV proper at thigh level and intracompartmental connective tissue elasticity were performed.

Results: Ninety-six patients had Doppler evidence for either bilateral or unilateral insufficiency of GSV proper at thigh level. For those with venous insufficiency, ultrasound shear-wave elastography values of intracompartmental connective tissue ranged between 1.55 and 10.44 kilopascals (mean 4.36±2.24 kPa); whereas for those without venous insufficiency, elastography ranged from 2.20 to 12.65 kPa with a mean of 4.82±2.61 kPa; difference among groups was statistically insignificant (p=0.231). No statistically significant threshold for predicting presence of venous insufficiency could be determined. There were no statistically significant correlations between age, gender and intracompartmental elasticity. In patients with unilateral insufficiency of GSV at thigh level, however, paired sample t-test revealed statistically significant lower elastography values around insufficient veins compared to normal GSV (p<0.001).

Conclusion: Many intrinsic and patient factors affect intracompartmental connective tissue elastography measurements; thus, cut-off values obtained from specific populations have limited generalizability. Statistically significant inpatient differences of intracompartmental elastography, on the other hand, may indicate that lack of elastic support from surrounding connective tissue, a mostly overlooked aspect of underlying pathophysiology, also contributes to venous insufficiency.

Non-Vascular interventional Radiology

FP - 06

Publication Hall: Meeting Room A

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PERCUTANEOUS CHOLECYSTOSTOMY: SINGLE CENTRE EXPERIENCE IN 105 PATIENTS WITH AN ACUTE CHOLECYSTITIS

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Purpose: The aim of this study is to evaluate the demographic features, complications, follow-ups and the requirement of cholecystectomy of patients who underwent a percutaneous cholecystostomy (PC) in our clinic (between 2016-2018) through the literature and our experiences.

Material and Method: In this retrospective study, 105 patients were evaluated according to demographic features, radiological findings, comorbidities and ASA scores. The patients were divided into two groups as patients who had acute calculous cholecystitis (ACC) and acute acalculous cholecystitis (AAC). One patient was diagnosed as emphysematous cholecystitis. Then post-procedural complications and necessity of cholecystectomy were reviewed.

Results: When the patients were evaluated according to gender, there was no significant difference (F=49,6%, M=50,4%). Mean age was 66,6 years. Patients with ACC have a mean age of 69,6 and with AAC of 65,4 years. In pre-procedural sonographic evaluation, 26 patients had AAC and 79 had ACC. The most frequent findings in both groups are hydropic gallbladder (83,8%), increased wall thickness (79%) and less frequently, intrahepatic (%24) and common bile duct (%27) dilatation. Also, 9 patients (%8,5) had sonographic findings of cholangitis. At the time of diagnosis, some patient had complication like perforated gallbladder and abscess.

Ultrasound guided transhepatic approach was preferred for PC. Usually, 8F catheters were used (%88,5). Catheters were placed with the Seldinger technique; only in one patient trocar technique was used.

The procedure was failed in 5 patients; three patients had severe agitation, one patient had gallbladder wall with excess flexibility and thickness and the other's gallbladder was totally filled with calculi. Of 87 patients (82,8%) presenting with various comorbidities; cardiac comorbidity (32,4%), DM (18%), pulmonary diseases (18%), stroke history (11,4%), malignancy (8,5%), and multiple trauma history (1,9%). When the patients were evaluated according to ASA scores, ASA-III scores seem to be more eligible for PC (41,9%). Following the procedure, in two patients abscess formation associated with the PC and bile leakage from the catheter were observed. 42 (38,1%) of the patients were operated after PC with cholecystectomy. The other 63 patient (61,9%) were treated only by removal of the catheters after a certain period of time without further intervention.

Discussion: PC is a minimally invasive choice of treatment with low complication rates in patients with acute cholecystitis who are considered to be at high risk for emergency cholecystectomy. However, there are no clear results regarding PC and cholecystectomy comparison. Further studies and data are needed. The indications for PC must be precise (e.g. a high-risk surgical patient with ASA score III/IV). Because for patients with calculi cholecystectomy is inevitable. In contrary, AAC can be managed non-operatively and further treatment may not be needed.

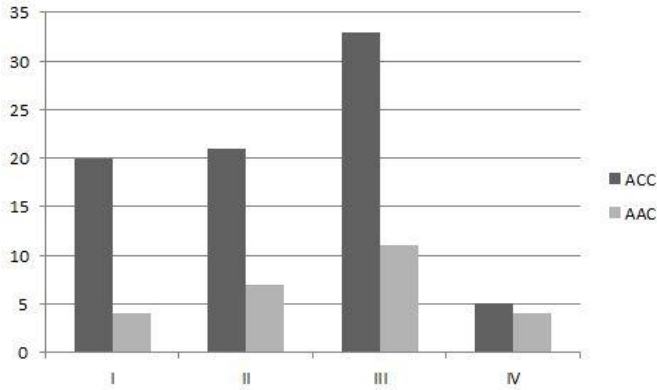
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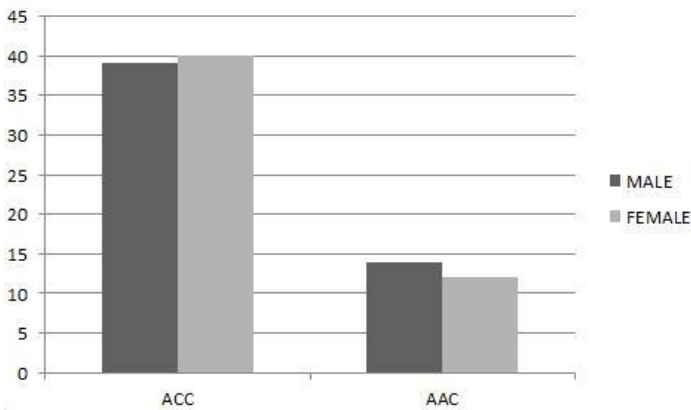
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Figure:

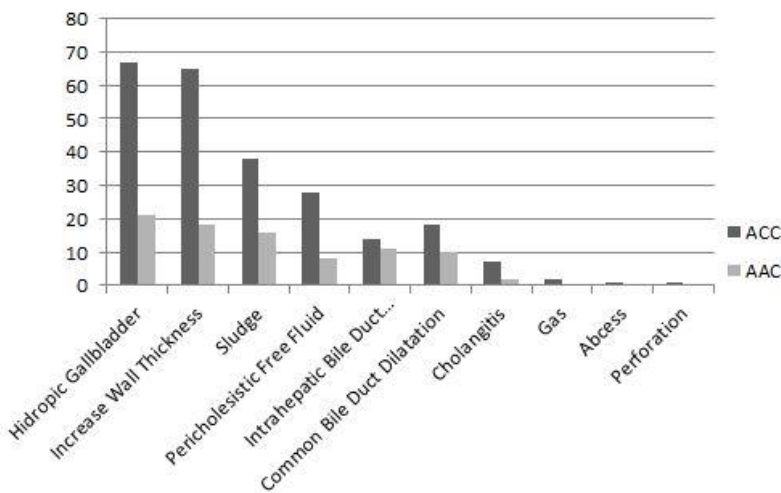
Description of the Figure: Patients ASA Scores



Description of the Figure: Patients gender distribution



Description of the Figure: Patients radiologic findings



Vascular interventional Radiology

FP - 07

Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 09:12:00

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INTERVENTIONAL TREATMENT FOR SYMPTOMATIC ACUTE PORTAL, SPLENIC AND SUPERIOR MESENTERIC VEIN THROMBOSIS

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¹Okan University Radiology Department

Objective:

Aim: The purpose of this study was to evaluate the utility of interventional treatment in 6 patients with acute portal and/or splenic, mesenteric vein thrombosis (PV, SV, SMV) with severe symptoms.

Material and methods: This retrospective study included 4 male patients and 2 female patients seen over a period of 1,5 years. None of patients had a history of cirrhosis. The average age was 37.8 years. One of the patients had previously undergone gastric resection. The complaints of two cases developed after pregnancy. Abdominal distension and/or pain (n=6), nausea and/or vomiting (n=3), loss of appetite (n=1), fever (n=1), diarrhea (n=1) were other symptoms. Patient routine blood examination and liver function tests were recorded for each patient. All patients undergone Colour Doppler Ultrasonography (CDUS) and CT (Computed Tomography) examination for diagnosis. Acute PVT was defined as detection of thrombus in the portomesenteric veins, absence of collateral veins and rapid onset of symptoms (3-12days). Thrombosis involvement in the portal and mesenteric veins were graded according to Yerdel classification. Patients were treated with thrombolytic therapy, thrombectomy and percutaneous transluminal angioplasty (PTA) via the transhepatic and/or superior mesenteric artery route. Improvement in symptoms, avoidance of bowel resection, complications, and radiographic evidence of clot resolution were the main clinical outcomes.

Results: All patients exhibited some degree of lysis of the thrombus. Two patients had complete resolution, 4 had partial resolution. All of the cases presented with symptoms of mesenteric congestion (edema in the intestinal wall, intraabdominal free fluid, etc). Emergency intervention due to risk of necrosis. All of patients had resolution of symptoms. No patients developed a major complication. No patients required bowel resection after thrombolytic therapy. No patient died with gastrointestinal hemorrhage and septic shock after thrombolytic therapy. Other major complications include bleeding and conditions requiring transfusion. No patients developed new portal or mesenteric thrombosis.

Conclusions: Interventional treatment, including direct PV-SV-SMV thrombolysis, is a safe and effective method for patients with symptomatic acute PV-SV-SMV thrombosis.

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Figure:

Description of the Figure: After interventional treatment



Description of the Figure: Portal vein thrombosis on abdomen CT



Description of the Figure: Portal vein thrombosis on DSA



Tables:

Patient	Thrombosis	Interventional treatment	Response
BÖ	PV, RPV	PTA+tPA	Total
SK	PV,SV,SMV	PTA+thrombectomy+tPA	Partial
HYY	PV	PTA+tPA	Partial
OT	PV,SV,SMV	PTA+tPA	Partial
CT	PV,SV,SMV	PTA+thrombectomy+tPA	Partial
HY	PV, SMV	PTA+thrombectomy+tPA	Total

Non-Vascular interventional Radiology

FP - 09

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PERCUTANEOUS CHOLECYSTOSTOMY: IS IT BRIDGE OR PERMENANT TREATMENT

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¹Süleyman Demirel University, Faculty of Medicine, Department of Radiology

Introduction and Aim: Treatment of cholecystitis is a surgical procedure in general. Percutaneous cholecystostomy is commonly used as a bridge treatment in patients who couldn't receive anesthesia. The purpose in our study is to determine the extent of surgical treatment and the need for re-cholecystostomy for the patients after percutaneous cholecystostomy.

Materials and Methods: Patients who had cholecystostomy for the last 2 years were included in the study. Demographic characteristics were defined retrospectively. Clinical and imaging findings were noted. Day of catheterization, re-catheterization and surgery time questioned by phone and from medical records.

Results: The average age of 31 patients was 76,7. Twelve patients were female and 19 were male. Nineteen patients had acute cholecystitis, 2 patient had emphysematous cholecystitis, 6 patients had choledocholithiasis, 2 patients had cholangiocarcinoma, 1 patient had acute pancreatitis, 1 patient had perforated gallbladder. Technical success of 31 patient was 96.7%. Procedure was failed in one patient because of anatomical difficulty. Percutaneous transhepatic cholangiography was done to him. Twelve patient had cholecystectomy after percutaneous cholecystostomy. One patient had operable cholangiocellular carcinoma and went to operation. Three patients died because of comorbid pathologies in 10 days. One patient refused the catheter and removed it after 2 days. 13 patients' catheter removed because of healed clinic, and they didn't go to cholecystectomy. They haven't clinically cholecystitis symptoms after our procedure.

Conclusion: This method, which is very often in interventional radiology practice, reduces the active inflammation symptoms of the patients until surgery. Also, in some patients replaces surgery due to comorbid diseases and age.

Vascular interventional Radiology

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Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 09:33:00

Publication End Date: 2019-04-23 09:40:00

THE REFLUX PATTERNS OF GREAT SAPHENOUS VEIN: DOES IT CORRELATE WITH CLINICAL SEVERITY?

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Objective: This study aims to establish a clinically applicable classification of reflux patterns in patients with great saphenous vein (GSV) insufficiency and to evaluate the relation between this classification, the demographics and severity of clinical findings.

Materials and Methods: 503 patients with GSV insufficiency were included in the study. Prospectively collected data were reviewed retrospectively. The mean age of the patients was 45.3+/-11.7 years, with the male-to-female ratio of 2:3. Doppler ultrasonography (Doppler US) was performed in 1006 extremities of 503 patients with GSV insufficiency. The reflux patterns of GSV insufficiency in the 787 legs after exclusion criteria were classified into 4 types as: Type 1, GSV reflux without involvement of malleolar region and saphenofemoral junction (SFJ); type 2, reflux involving malleolar region with competent SFJ; type 3, reflux involving SFJ with competent malleolar region; and type 4, reflux involving both the SFJ and the malleolar region. We evaluated the association between the classification of GSV insufficiency and age, gender, body mass index, disease duration, CEAP classification or venous clinical severity score (VCSS).

Results: The most common reflux pattern in patients with GSV insufficiency was type 3 (48.9%), while 14.8% of patients had type 1, 10.4% had type 2, and 25.7% had type 4. The reflux patterns were associated with age ($p=0.046$), number of children ($p=0.008$), weight ($p=0.002$) and body mass index ($p=0.007$). Patients with type I reflux pattern were younger in age, with lower body mass index, and had milder clinical symptoms (43.39 +/- 11.01, 25.02 +/- 3.85, 2.74 +/- 2.30, respectively). On the other hand, malleolar region and saphenofemoral junction incompetence correlated with an older age compared to the patients with competent malleolar region or SFJ (46.90 and 46.18 vs 43.39, respectively). Duration of disease symptoms was not significantly correlated with the reflux patterns, but CEAP score and VCSS of patients were significantly associated with the reflux type ($p=0.002$).

Conclusion: We developed a clinically applicable classification of reflux patterns in patients with GSV insufficiency based on the involvement of malleolar region and/or SFJ. Clinical severity score increased with the involvement of malleolar region as in type 2 compared to type 1 (2.82 vs 2.74), and further increased with type 3 (4.13 vs 2.82). Patients with diffuse reflux pattern (type 4) had the most severe clinical presentation (4.59 +/- 2.9).

Non-Vascular interventional Radiology

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Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 09:40:00

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CAN WE INCREASE THE VISIBILITY OF BIOPSY NEEDLE BY USING ACUSTIC RADIATION FORCE IMPULSE (ARFI) ELASTOGRAPHY IN ULTRASONOGRAPHY?

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Objective: To increase the visibility of biopsy needles by performing experimental in vitro studies with ultrasound-guided interventional procedures.

Materials and Methods: This invitro study was performed by using standard ultrasound and acustic radiation force impulse (ARFI) elastography with standard flat 20G spinal needle. In real time, the visibility of both needles under ultrasound guidance was performed on homemade gelatin phantom. The biopsy needles were recorded quantitatively and qualitatively at different angles (between 15, 30, 45 and 60 degrees) according to the ultrasound probe. The results were evaluated by three interventional radiologists. The assessment was made in the form of scoring from 1 to 5. (1 - invisible, 2 - bad, 3 - medium, 4 - good, 5 - very good)

Results: The visibility of the needle varies depending on the environment, angle, reflective surface, and the air content of the needle. When the visibility of the needle in the ARFI elastography group is compared to the standard ultrasound group in all angles, it is understood from the good scores that the visibility is increased in the Real-time ARFI elastography. (P <0.05)

Conclusion: The visualization of the needle provides important advantages in terms of increasing the success of ultrasonographic guided interventional procedures and shortening the processing time. Many methods are used to increase the visibility of the needle. Real time ARFI elastography can be used as a new technique during biopsy as the visibility of the needle is increased in ARFI elastography compared to standard ultrasonography.

Non-Vascular interventional Radiology

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Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 09:47:00

Publication End Date: 2019-04-23 09:54:00

PERCUTANEOUS TREATMENT OF A COMPLICATED HYDATID CYST: A NEW TECHNIQUE

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Purpose: Cystobiliary fistula is a complication of hydatid cyst. After prolonged catheterization and other interventional treatment options, the fistula may not close, and some patients need surgery. Hydatid cyst surgery has some complications including biliary fistula. In addition, some patients may not be eligible for surgery. Therefore, an efficient percutaneous treatment of a complicated hydatid cyst is very important. The aim of this study is to close the cystobiliary fistulas efficiently and safely with a new percutaneous treatment technique.

Materials and Methods: All patients had PAIR (Puncture, Aspiration, Injection and Reaspiration) technique applied with 8 Fr (french) pigtail catheter. There was no visible cystobiliary fistula at the initial procedure of the patients. At follow-up cystobiliary fistula was detected. Drainage catheters was changed from 8 Fr to 10-12 Fr. The fistulas didn't close and the amount of daily drainage volume increased during follow-up. The patients underwent ERCP (endoscopic retrograd cholangiography). Papillotomy and 8-10 Fr plastic stent placement performed. Persistency of the fistula detected two months after the initial procedure. All patients were not eligible for surgery.

All patients were reassessed for the closure of cystobiliary fistula with the new technique. 8 Fr sheath was introduced through the drainage catheter tract over a 0.035-inch guidewire. After that 5 Fr vertebral catheter, and through its lumen, 2.7 Fr microcatheter were introduced to the fistula orifices and the fistula tracts was embolized with detachable peripheral coils. Finally, fistula orifices and cyst cavities were completely embolized with a 1 cc NBCA (N-bütül ciano accrilat) and 4 cc nonioinic contrast medium combination. The day after the procedure, plastic stents were removed with ERCP. First, third, sixth, twelfth- and twentieth-month follow-up imaging performed with ultrasonography and MDCT (multidetector computed tomography), and there was no recurrence.

Results: 358 patients with hydatid cyst, that was admitted to our interventional radiology department between 2014-2019, retrospectively reviewed. Twenty-four patients with cystobiliary fistula determined. Of these, a new percutaneous technique applied for three patients with fistulas that not respond all percutaneous treatment options and not eligible for surgery. All three patients had hydatid cysts bigger than 5 centimeters and classified as type 1-2 according to Gharbi Classification. First, third, sixth and twelfth, twentieth month follow-up performed with ultrasonography and MDCT (multidetector computed tomography) showed no recurrence.

Conclusion: Embolisation of the tract of fistula and cyst cavity with detachable peripheral coils and NBCA in patients with refractory cystobiliary fistula is an efficient and safe alternative of the surgery.

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Figure:

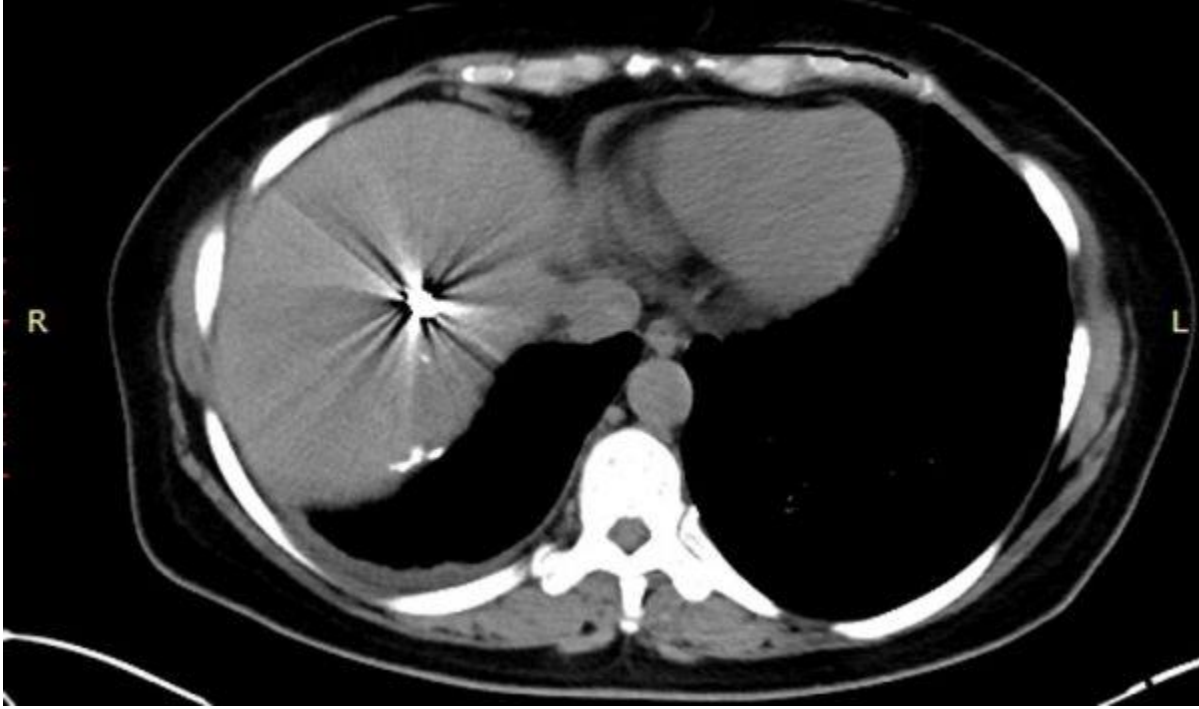
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Vascular interventional Radiology

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Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 09:54:00

Publication End Date: 2019-04-23 10:01:00

BALLOON ANGIOPLASTY OF INFRAPOPLITEAL STENOSIS IN PERIPHERAL ARTERIAL DISEASE OF LOWER EXTREMITY AND THE RESULTS OF THIS APPLICATION

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Aim: Peripheral arterial diseases (PAD) in the lower extremity are steno-occlusive diseases caused by thrombosis and thromboembolic events in the arterial system distal to the aortic bifurcation. PAD, often affects men and women over the age of 50 years. The risk of cardiovascular and cerebrovascular disease, which is the main cause of mortality and morbidity in PAD, increases. The difficulties of endovascular intervention in infrapopliteal PAD are many for interventional radiologists working in this field. The prevalence of severe and large calcifications, the presence of a large number of vessels that require potentially intervention, more frequent occlusion than stenosis, potential access difficulties and other anatomical considerations are just some of the problems encountered. Drug-coated balloons as well as conventional balloon angioplasty have recently become available in the treatment of infrapopliteal PAD and have become a promising new option for arterial angioplasty.

The aim of this study was to investigate the technical success of percutaneous balloon angioplasty and its effect on limb salvage in patients with symptomatic infrapopliteal PAD who has grouped according to Trans-Atlantic Inter-Society Consensus II (TASC) classification, updated in 2015.

Methods: 56 patients aged between 40 and 97 years with intermittent claudication and critical limb ischemia who have been applied endovascular revascularization therapy with conventional or drug-eluting balloon dilatation at Ankara University Radiology Department Angiography Unit between February 2012 and February 2018 were included to the study. Patients demographic characteristics, comorbid diseases, TASC classification of the lesions, angiographic images and technical details were analyzed retrospectively for evaluating technical success and 12-month limb salvage rates.

Results: During the study period, 56 patients record were examined. The study population predominantly consisted of patients with critical limb ischemia who have multiple comorbidities, TASC B (44.6%) and C (32.1%) lesions. %35,7 of the lesions were over 10 cm in length, and were occlusive and heavily calcified. The technical success rate of infrapopliteal balloon angioplasty was found to be %91.1. The 12-month limb salvage rate was %72.9 in patients with technical success. Among the factors that affected initial technical success, TASC classification and length of lesion were found to be significant and among the factors that affected 12-month limb salvage rate, only TASC classification found to be significant.

Conclusion: Balloon angioplasty has effective technical success and good limb salvage rates in patients with complex infrapopliteal peripheral arterial disease.

Figure:

Description of the Figure: Figure 1: 76 years, F patient. More than %90 stenosis of a segment shorter than 5 cm at anterior tibial artery was observed, the lesion was classified as TASC A (A). Angiographic images before and after conventional balloon dilatation are seen (B-C).



Description of the Figure: Figure 2: 47 years, M patient. Stenoocclusive lesions at peroneal artery was classified as TASC B (A). Angiographic images before and after drug coated balloon dilatation are seen (B-C).



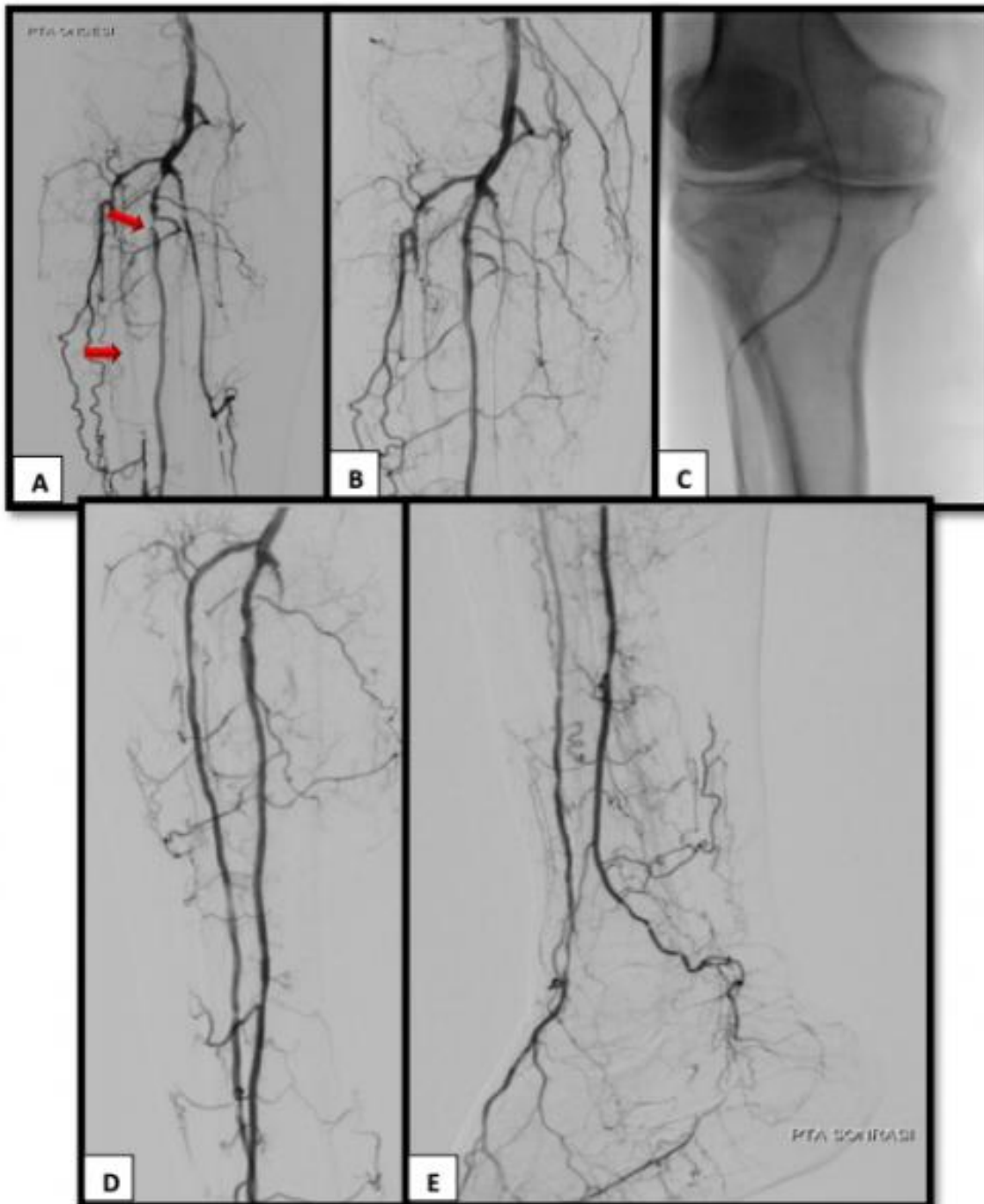
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Description of the Figure: Figure 3: 71 years, M patient. Single complete occlusion longer than 10 cm and multiple stenoses at anterior tibial artery were observed and the lesion was classified as TASC C (A). Angiographic images before and after convantionel balloon are seen (B-C-D)



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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 08:30:00

Publication End Date: 2019-04-23 08:37:00

SUCCESS RATES IN USING AN ABSORPTIVE PLUG IN ANTEGRADE SFA PUNCTURE CLOSURE

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Vascular closure devices (VCD) have been used to achieve hemostasis of percutaneous access sites following endovascular procedures, with reported decreased time for arterial control as well as decreased time to ambulation.

Between September 2016 and January 2019, we performed 182 diagnostic and interventional angiographic procedures via superficial femoral arterial access. The ExoSeal VCD (polyglycolic acid (PGA)) containing device was used at the puncture site to achieve hemostasis in 123 patients. We evaluated the technical and procedural success rates, the complications, and the factors affecting the hemostasis time of the ExoSeal VCDs.

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 08:37:00

Publication End Date: 2019-04-23 08:44:00

WHAT SHOULD WE DO TO PREVENT REPEAT BIOPSY AND MAJOR COMPLICATION FOR THE KIDNEYS. OUR RESULT IN 106 PATIENTS

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Objective: The aim of this study was to emphasize the importance of the initial evaluation of the qualification assessment pathological sampling at bedside and to explain the results of sponge plugs used to prevent major complications.

Materials and Methods: Non - mass renal parenchymal biopsies were included in the study between October 2018 and January 2019. 106 patients were included in the study. Totaly 112 biopsies were performed.

Pathology competence study was performed in 50 patients during biopsy. Six of the 56 patients who had not undergone pathology adequacy were needed for a second time biopsy.

Sponge plugs were applied from the coaxial system to the patients needed for bleeding control during biopsy.

Complication rates were evaluated at 24-hour follow-up.

Conclusions: 1. Pathology adequacy study during biopsy eliminates the need for repeat biopsy.

2. Sponge plugs applied to control bleeding during the procedure prevented the development of major complications.

Oncologic interventional Radiology

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 08:44:00

Publication End Date: 2019-04-23 08:51:00

USEFULNESS OF DUAL PHASE CONE BEAM CT IN HEPATOCELLULAR CARCINOMA PATIENTS TREATED WITH RADIOEMBOLIZATION

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Purpose: The aims of the study were: (1) to show that dual-phase imaging is doable with one contrast injection, (2) to compare these two phases and evaluate additional benefits during radioembolization procedures.

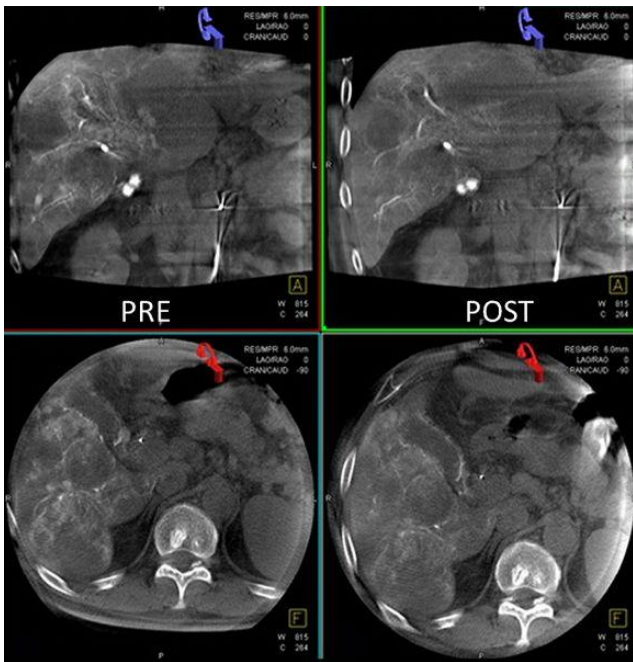
Methods: Twenty-three hepatocellular carcinoma patients undergoing radioembolization treatment were scanned with dual phase C arm CT consisting of early arterial and late arterial phases before and after Yttrium-90 administration. The CT like datasets were compared according to lesion detectability, enhancement patterns, image quality and artifacts by two interventional radiologists blinded to each other. Compatibility of two radiologists was evaluated with kappa statistical analysis and difference between early and late arterial phases was evaluated with marginal homogeneity test.

Results: For 23 patients 92 data were acquired and technical success rate for C-arm CT was %100. No statistical difference was found for tumor detection between early arterial and delayed arterial phases ($p=1$). Tumor enhancement was visually superior at delayed arterial phases whereas early arterial phases were better for arterial mapping for selective catheterization.

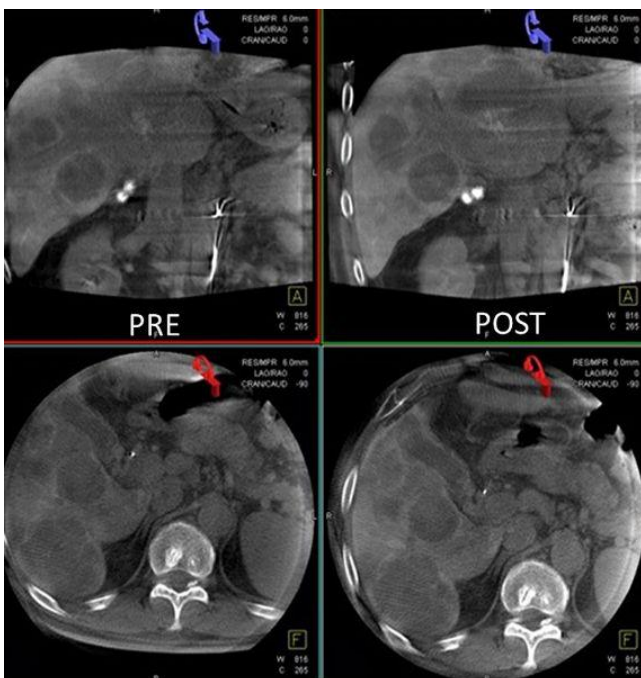
Conclusion: Dual-Phase C-arm CT is technically doable and allows better assessment during radioembolization procedures as early phases provide good mapping for super selective catheterization whereas late phases are better for visualization of tumor enhancement.

Figure:

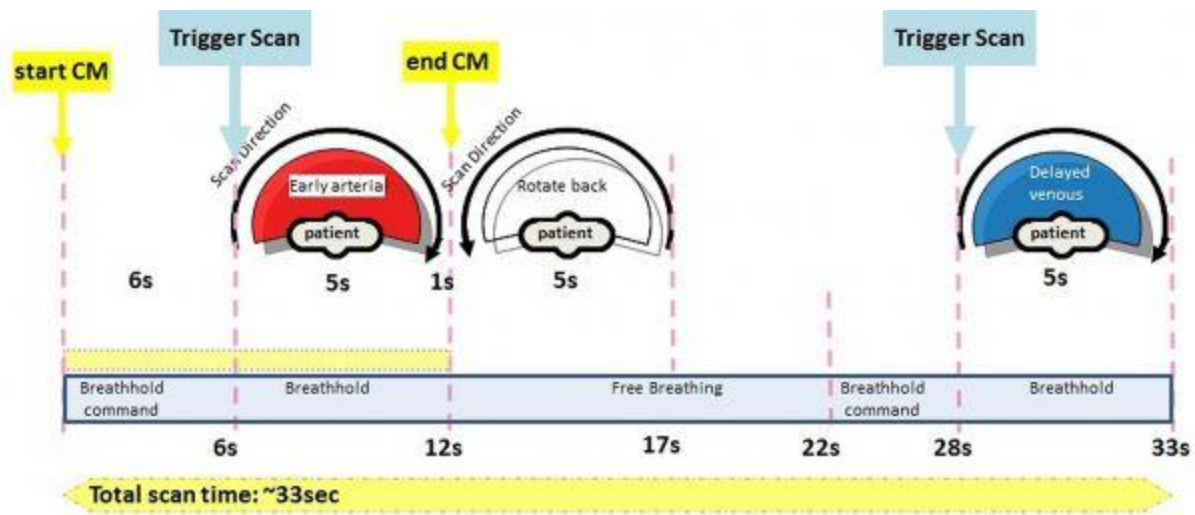
Description of the Figure: Pre and post embolization axial and coronal early arterial phase images.



Description of the Figure: Pre and post embolization axial and coronal late arterial phase images.



Description of the Figure: The diagram showing the timing of the breathhold command and contrast injections in dual phase C arm CT technique.



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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 08:51:00

Publication End Date: 2019-04-23 08:58:00

UTILITY OF MARKER CLIP PLACEMENT FOR BREAST CANCERS IN PATIENTS UNDERGOING NEOADJUVANT CHEMOTHERAPY BEFORE SURGERY

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Objective: The objective of this study is to determine the utility of marker clips for localization of breast tumors in patients who undergo preoperative chemotherapy for breast cancer.

Materials and Methods: Between January 2017 and January 2019, 56 patients (mean age of 49) had radiopaque marker-clip placement for breast cancer and axillary metastatic lymph nodes before neoadjuvant chemotherapy (NAC). All the marker clips were placed under ultrasound (US) guidance. All the patients had control mammography (MMG) to confirm the place of marker clip after the procedure in the same day. All these patient's pre- and post-treatment radiologic images and tumor response to NAC reviewed retrospectively.

Results: Of these 56 patients, 17 of them were excluded because their NAC and follow-up period has not been completed. Of the remaining 39 patients, 11 (28%) had subcutaneous/simple or radical mastectomy because of multifocality or no response to NAC, 8 (21%) had partial regression and 20 (51%) had significant (total and nearly total) regression in the initial tumor size. In these 20 patients tumours were not palpable. Eleven of them had US-guided and 9 had MMG-guided clip marker localization pre-operatively. Four patients had computed tomography guided marker clip localization for axillary lymph nodes, also. Thus, clip marker placement was useful in 51% of the patients who had significant response to NAC and whose tumors were not palpable. In the patients who had MMG-guided clip-marker localization (23%), tumor localization was not possible without clip-marker (Figure 1).

Conclusion: Recent researches revealed the efficacy of neoadjuvant chemotherapeutic agents in breast cancer before surgery. With the new agent's breast cancer may show complete response to chemotherapy and defining the tumour bed may be impossible during surgery. Marker clip insertion is safe and microinvasive. It has the utility of accurate localization of non-palpable breast tumours and axillary metastatic lymph nodes after NAC before surgery.

and

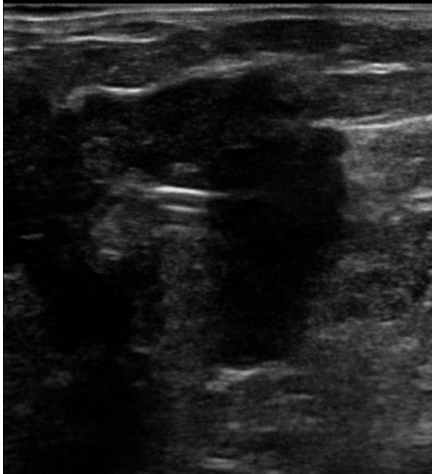
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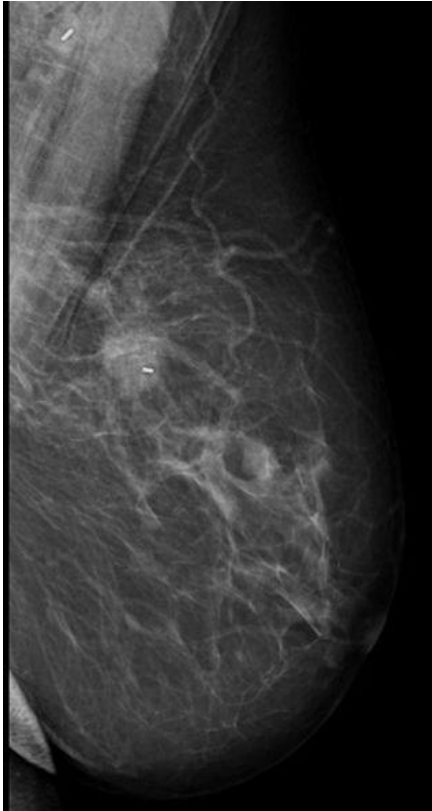
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Figure:

Description of the Figure: Figure 1a. A 2 cm invasive ductal carcinoma with spiculated margins is seen in this ultrasound (US) image. After ultrasound-guided marker clip placement, marker clip is seen in the tumour.



Description of the Figure: Figure 1b. Mammography performed after clip marker placement reveals the clips in both the tumour and the axillary lymph node. The nodularity density in the same breast close to the clip area is histopathologically diagnosed as fibroadenoma.



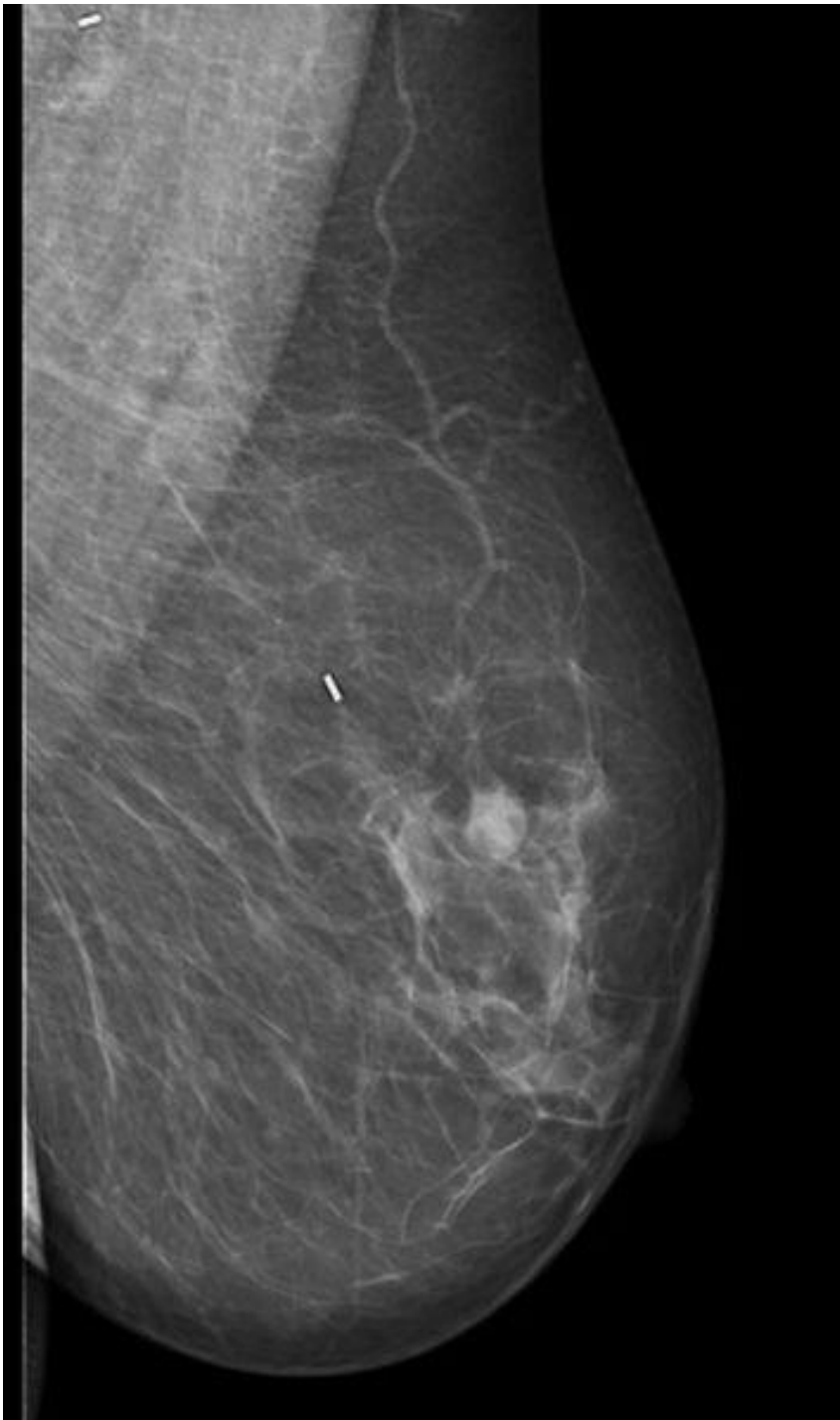
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Description of the Figure: Figure 1c. Left MMG image reveals complete response of the tumor to neo-adjuvant therapy. This is an example to emphasize the importance of post-procedural MMG imaging not to misunderstand this image as clip migration.



Non-Vascular interventional Radiology

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 08:58:00

Publication End Date: 2019-04-23 09:05:00

ASSESSMENT OF OUR INITIAL RESULTS IN IMAGE-GUIDED PERCUTANEOUS BONE BIOPSY; CORRELATION BETWEEN RADIOLOGICAL AND HISTOPATHOLOGICAL DIAGNOSIS

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¹The University of Health Sciences, Istanbul Sisli Hamidiye Etfal Training and Research Hospital

Objective: Percutaneous bone biopsy procedure has an important role in diagnosis of bone tumors. The objective of this study is to search for correlation between radiological assessment and histopathological diagnosis in Computed Tomography (CT) and Ultrasound (US) guided percutaneous biopsy of bone tumors and to share our results.

Materials and Methods: Between January 2017 and January 2019, 118 patients had percutaneous bone biopsy in our institution. Twenty-three of them were excluded because they had bone marrow biopsy for differential diagnosis of hemathologic diseases. Ninety-five patients (54 M; 41 F; between 7 and 82 years-old; mean age of 44) had 95 bone biopsies for either benign or malignant lesions Mean diameter of the lesions was 30 mm. Of the 95, 87 patients had CT-guided, 8 had ultrasound guided bone biopsy procedure. The distribution of the localizations of the lesions is shown in Table 1. For CT-guided procedure Jam-shidi needle (11 Gauge; 10, 15 cm) was used in 71 patients and fine-needle was used in 16 patients. For US-guided procedures, core-needle biopsy was performed with a semi-automatic-core needle. The correlation between radiological assessment and histopathological results was assessed retrospectively for all the lesions and yield rates were assessed.

Results: Of these 95 patients, 33 (35%) had malignant, 49 (52%) had benign and 13(13%) had non-diagnostic histopathological results. Of the 13 patients who had non-diagnostic results, 6 (9% of all Jam-shidi needle biopsy) had CT guided jam-shidi needle biopsy, 7 (44% of all fine needle aspiration biopsy (FNAB)) CT guided FNAB. Our yield rate was %87 in CT guided biopsy and %100 in US guided biopsy.

Excluding the 13 patients who had non-diagnostic pathology results, 30 patients received radiological and pathologically positive diagnosis. On the other hand, 44 patients received radiological and pathologically negative diagnosis. Assessing the correlation between radiological and histopathological diagnostic results, positive predictive value, negative predictive value, sensitivity and spesificity values were 86%, 94%, 91% and 90% in our study. The distribution of the results is shown in Table 2. No minor or major complication was occurred related to the biopsies.

Conclusion: CT-guided bone biopsy is safe and less invasive compared to open surgical biopsies. It has high yield rate in diagnosis of bone masses and the diagnostic yield was higher in Jam-shidi needle biopsies. Radiological imaging has high sensitivity in prediction in diagnosis of bone lesions with a high negative predictive value.

and

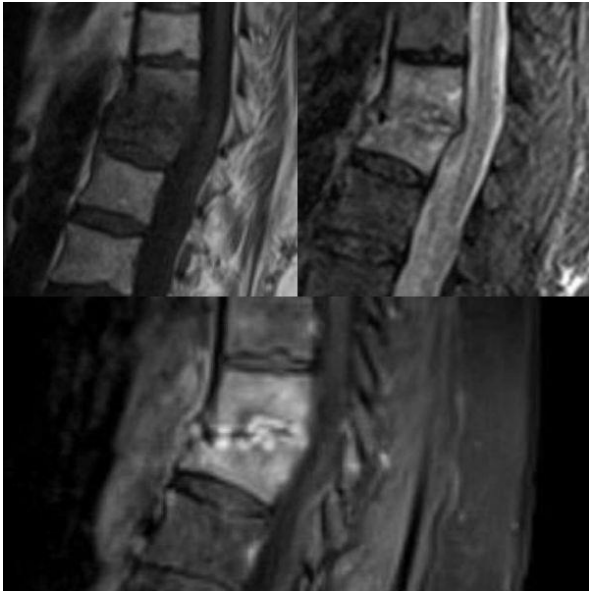
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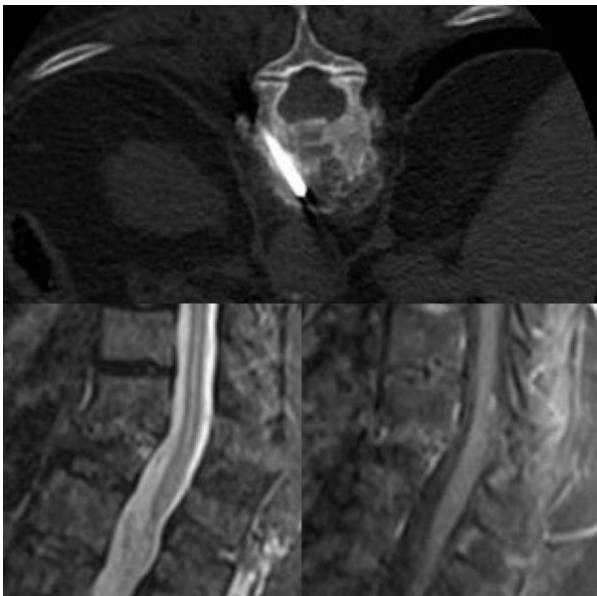
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Figure:

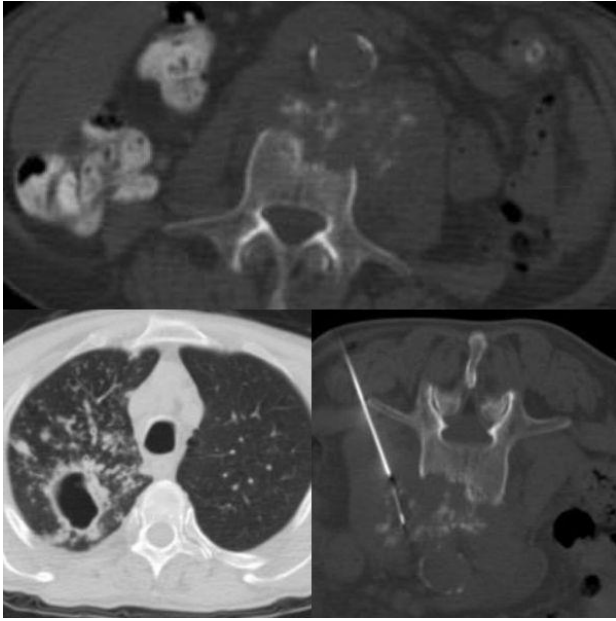
Description of the Figure: Figure 1: A spinal vertebral lesion is seen on D11 and D12 on sagittal lumbar spine MR images in 65 years old female (a). The patient did not have a malignancy or trauma in background history. The lesion was lytic on CT-examination and was found lowly s



Description of the Figure: Figure 1: A spinal vertebral lesion is seen on D11 and D12 on sagittal lumbar spine MR images in 65 years old female (a). The patient did not have a malignancy or trauma in background history. The lesion was lytic on CT-examination and was found lowly s



Description of the Figure: Figure 2: A lytic and destructive lesion which involves paravertebral soft tissue, is seen on L3 vertebra on spine CT scan of a 64 years old male. There is a cavitary lesion with irregular shape in right lung. A CT guided percutaneous biopsy performed and



Tables:

Table 1. The distribution of the localization of the lesions.

Localization of tumor	Number of the patients	%
Spine	38	40
Pelvic bones	20	21
Femur	17	18
Tibia	6	7
Scapula	3	3
Humerus	4	4
Sternum	1	1
Costa	2	2
Metacarp	1	1
Calvary	2	2
Clavicula	1	1
Total	95	100%

Table 2: The distribution of the results in radiological prediction versus histopathological diagnosis.

Diagnosis	Histopathologically positive	Histopathologically negative	Non-diagnostic	Total
Radiologically positive	30	5	3	38
Radiologically negative	3	44	10	57
Total	33	49	13	95

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 09:05:00

Publication End Date: 2019-04-23 09:12:00

THE ULTRASOUND GUIDED A NOVEL DUAL INJECTOR MODEL FINE NEEDLE ASPIRATION BIOPSY FOR THYROID NODULE

Cağlayan Çakır¹

¹Istanbul Bakıköy Dr. Sadi Konuk Education and Research Hospital

Introduction: Thyroid nodules, which have been described as lesions that can be differentiated from normal thyroid tissue with radiological imaging, constitute an important clinical problem as they are frequently seen in daily practice. The purpose of diagnosis is to exclude malignancy. Fine needle aspiration biopsy is a successful and reliable diagnosing method. Complications of the procedure are very rare. The use of US guidance is necessary to define the solid or correct side of semisolid thyroid lesions. With the current innovations of 3D printers, it is now possible to implement computerized drawings and designs, and in this way, we produced a new model to improve diagnostic rates and facilitate the process of FNAB. Fine needle aspiration biopsy has become the gold standard to diagnose thyroid nodules with the success rate reported to be 85-94% (1).

Using a newly-developed model, histopathologic sampling was made from different locations of the nodule at the same time. The aim of this study was to offer this new dual injector model in terms of cytological accuracy, from the results of a total of 131 patients with thyroid nodule.

Purpose: Ultrasound guided a novel dual injector model fine needle aspiration biopsy (FNAB) is an effective and easy to apply diagnostic method. The method and technique used to obtain samples from the correct component are important in the correct nodule.

Material and Methods: A total of 131 thyroid nodules were applied with ultrasound guided fine needle aspiration biopsy with a novel dual injector model fine needle aspiration. This technique was designed in a computer environment and a 3D printed dual injector model was applied to the patient group between Feb 2018-May 2018 in our clinic. Cytological diagnoses were based on the Bethesda classification and ultrasonography findings of the cases were recorded within the specified criteria.

Results: The mean age of the patients in the whole sample was 51,66±12,64 years. The mean size of the nodule was 24,79±7,72mm. No statistically significant difference was determined between the age and nodule size. (p>0,05). The diagnosis was incorrect in %14,50 (19/131) and correct in, %85.50 (112/131) of cases. No technical complications were observed in patients.

Conclusion: Ultrasound guided FNAB is an effective, reliable and easy-to-apply diagnostic method. The method and technique used to obtain samples from the correct component are important in the correct nodule and in semisolid nodules. It can be considered that the newly developed model, using more nodules and needles at different thicknesses may increase the success rate significantly.

and

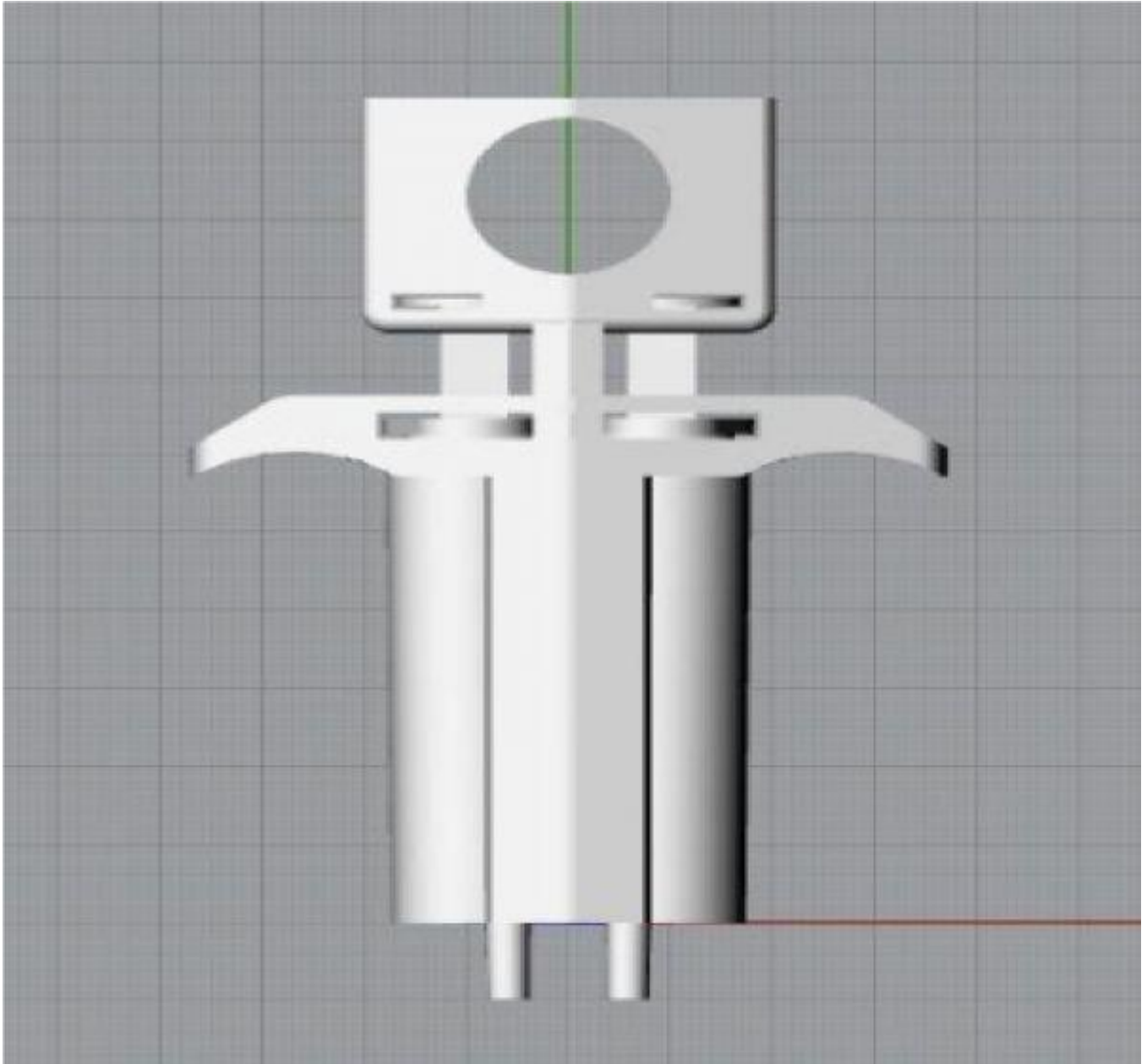
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Figure:

Description of the Figure: The model combines two 5 ml injectors into a single instrument



Non-Vascular interventional Radiology

FP - 20

Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 09:12:00

Publication End Date: 2019-04-23 09:19:00

PERCUTANEOUS MANAGEMENT OF COMPLICATED PARAPNEUMONIC EFFUSIONS AFTER SURGICAL TUBE THORACOSTOMY FAILURE IN CHILDREN

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Aim: To evaluate percutaneous management results of complicated parapneumonic effusions after surgical tube thoracostomy failure in children.

Material-methods: Between 2004-2017, 65 children treated percutaneously after tube thoracostomy failure. Management protocol was imaging-guided pigtail catheter insertion, continuous fibrinolytic therapy, serial ultrasonographic pleural evaluation, catheter manipulations (revision, exchange or upsizing) when necessary. All patients followed-up at least for 1-year were included in this study.

Results: Drainage procedures were performed under US guidance in 56 (86.2%) patients. In 9 (13.8%) patients US and fluoroscopy combination was needed. Unilateral single, unilateral two and bilateral catheter insertions were performed in 54, 9 and 2 patients respectively. Inserted catheter sizes were ranged between 8-16 Fr. The technical success rate was 100%. Streptokinase, Urokinase and t-PA were used as fibrinolytic agent in 44.6%, 21.5% and 33.8% of the patients respectively. Major complications or mortality were not detected. In order to maintain effective drainage addition to primary drainage procedures, 30 additional procedures (catheter exchange, revision, reposition or new catheter placement) were performed in 15 (23.1%) patients. Clinical success was achieved in 64 (**98.5%**) of 65 patients. Median catheter duration was 7 days and mean hospital stay after percutaneous treatment was 15.3 days.

Conclusion: interventional radiological management can be successful for pediatric complicated PPE cases who had had a previous unsuccessful surgical chest tube, usually inserted without the benefit of imaging guidance, even as a secondary intention. If a surgical chest tube has already been inserted and the response is poor, percutaneous management should be tried instead of more aggressive surgical options.

Non-Vascular interventional Radiology

FP - 21

Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 09:19:00

Publication End Date: 2019-04-23 09:26:00

INVESTIGATION OF RELATIONSHIP BETWEEN PERCUTANEOUS BILIARY DRAINAGE TECHNIQUE (INTERNAL OR EXTERNAL) AND INFECTION FREQUENCY IN PATIENTS WITH MALIGNANT BILIARY OBSTRUCTION

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Extrahepatic cholestasis represents a decline in bile drainage as a result of an obstruction in intra- or extrahepatic bile ducts. In patients who are not eligible to surgery, percutaneous biliary drainage (PBD) can be performed palliatively and “internal-external” or “external” biliary drainage catheters are placed for drainage. There is limited and controversial data in the literature whether the internal-external type of catheters which is advanced through the obstruction level into the bowel lumen, increases the infection risk afterwards the initial drainage procedure. In this study, 410 patients having malignant biliary obstruction, in which internal-external or external biliary drainage catheters had been applied between January 2012 and October 2016, were retrospectively evaluated. Sixty-seven patients detection of active biliary tract infection findings and chronic systemic disease that predispose to infection such as diabetes mellitus and chronic renal failure were excluded from the study and the study was completed with 343 patients. We aimed to investigate the relationship between percutaneous biliary drainage technique and infection frequency by evaluating patients with clinical findings, bile and-or blood cultures, complete blood counts and blood biochemistry. There was no significant statistical difference between two groups (internal-external or external biliary drainage catheter placed) in regard to age, gender, primary diagnosis, history of chemotherapy, dimensions of catheters and being inpatient-outpatient. Following catheter placement, catheter related infection was observed in 49 of 216 (22.7%) patients with internal-external and 18 of 127 (14.2%) with external biliary drainage catheters, according to the defined criteria ($p>0.05$).

There was no significant statistical difference between two groups in regard to catheter related infections. There was also no difference in regard to frequently proliferating microorganisms in bile cultures. We conclude that, internal-external biliary drainage catheter placement does not lead an additional infection risk on uninfected cholestatic patients whose obstruction level could be passed easily in the initial drainage.

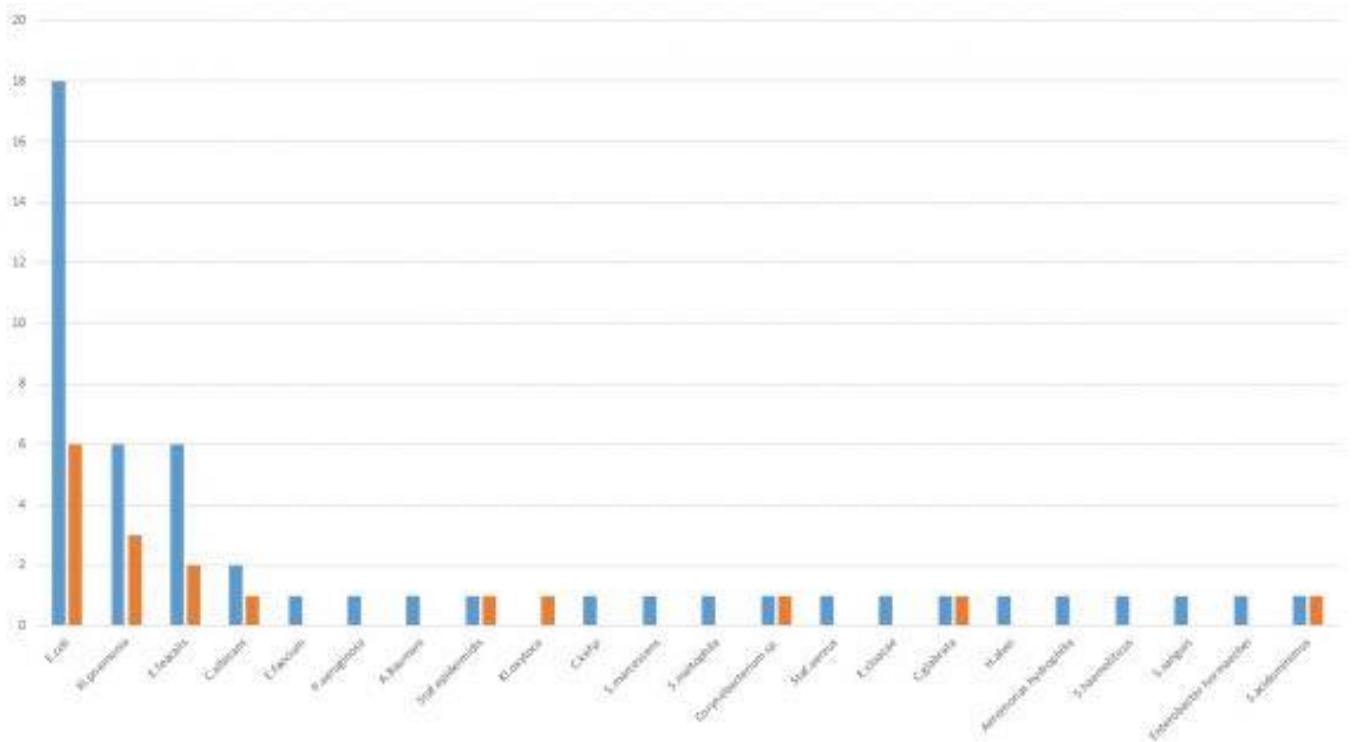
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Figure:

Description of the Figure: Figure-1 Comparison of microorganisms propagating in bile cultures of patients with internal-external and external catheter-related infections (Blue columns show internal; orange columns show external biliary drainage).



Oncologic interventional Radiology

FP - 22

Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 09:26:00

Publication End Date: 2019-04-23 09:33:00

THE IMPORTANCE OF EPIDURAL CATHETERIZATION AND NURSING CARE IN PAIN MANAGEMENT AFTER UTERINE FIBROID EMBOLIZATION

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Purpose: We aimed to evaluate the epidural catheter application in terms of nursing care in patients who underwent spinal anesthesia for uterine fibroid embolization and determine the pain levels of patients who were followed up with an epidural catheter in the postoperative period.

Materials and Methods: Our study was performed on 13 patients (ages between 31- 46 yo) who applied to our department from January to September 2018. According to the imaging studies performed before the procedure, the fibroid sizes varied between 5 and 15 cm. Spinal anesthesia was applied to the patients before the procedure. Sensory block level was at or above T6 dermatome. Epidural catheter was inserted for postoperative analgesia. For the embolization, 300-500 and 500-700 µm Bead Block[®] (Biocompatibles UK Ltd, Farnham, UK) microspheres which are manufactured from polyvinyl alcohol (PVA) hydrogel were used. According to North American Nursing Diagnoses Association–International (NANDA–I) classification, nursing care plans for infection, bleeding, acute pain, nausea and vomiting, sleep disorders and urinary incontinence, which were present and at risk of occurrence after the procedure, were made. Pain severity was evaluated with visual analogue scale (VAS). According to the severity of the pain, analgesia was performed by the epidural and intravenous route. Blood pressure, pulse rate and body temperature were measured at intervals during 24-hour follow-up.

Results: The duration of this procedure varied between 50 min and 120 min. The highest VAS scores were usually given by the patients in the first and second hours after the procedure. It was also noted that high scores were given between the 12th and 18th hours. Analgesia was performed in 13 patients with epidural catheter against pain due to loss of spinal anesthesia after the procedure. In 8 patients (61,5%), between the 12th and 18th hours, there was an increase in pain intensity. Therefore, additional analgesic was applied with epidural catheter. No epidural additional analgesic was required in 5 patients (38,4%). Overall 11 patients (8,4%) had nausea, 2 patients (15,3%) had vomiting, 2 patients (15,3%) had allergic reactions, 1 patient (7,6%) had increased body temperature after 24 hours. Blood pressure and pulse rate did not change significantly when the patients' pain increased ($p>0.05$). No hematoma was observed in patients undergoing intervention. No signs of infection were observed. None of the patients had urinary incontinence. Patients were mobilized after 24 hours and they had no sleep disorders.

Conclusions: Spinal anesthesia applied before the embolization procedure decreased the severity of pain in the first 2 hours in the postoperative period. In the following hours, pain could be controlled with analgesics given from the epidural catheter. The fact that the pain was able to be taken under control was an advantage in the implementation of nursing interventions for nursing diagnoses.

Non-Vascular interventional Radiology

FP - 23

Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 09:33:00

Publication End Date: 2019-04-23 09:40:00

EFFICACY OF PAIR TECHNIQUE IN HYDATID CYST TREATMENT: A SINGLE CENTER STUDY

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Aim: Our study aims to evaluate the efficacy of PAIR technique in hydatid cysts.

Methods: Sixty-one patients (37 female, 24 male) with 80 Gharbi type 1 and 2 hydatid cysts, treated by PAIR technique between September 2016- December 2018 were included in this study. Albendazole was orally given at a dose of 10 mg/kg/day for 1 or 2 weeks before and 3-6 months after the percutaneous procedure as prophylaxis to decrease the risk of secondary dissemination. The mean age was 43.1(11-80). Seventy-seven cysts were in the liver, two were in the spleen and one was in pelvis. In 76 cysts, one session was enough for successful treatment, whereas 4 cysts required a second procedure. All patients were hospitalized overnight. Follow up was done at 1st week, 1st month, 3rd month, 6th month, 9th month and 12th months. At each follow up visit, in addition to routine blood tests, patients were examined with US.

Results: Mean follow-up was 1 year. Lesions that developed wall calcifications or were predominantly solid in follow-up imaging were accepted as successful treatments. Seventy-six cysts (95%) were successfully treated, 4 cysts required a second session. We had 2 cystobiliary fistula (2.5%) and 3 abscesses (3.75%). All these complicated cases were followed up with catheters for appropriate periods. One patient developed anaphylaxis during the procedure and was hospitalized in intensive care unit for 3 days. She was later discharged uneventfully.

Conclusion: PAIR technique is an efficient and highly successful method in hydatid cyst treatment. Low complication rates and short hospitalization periods favors this technique over surgical approaches.

Figure:

Description of the Figure:

Hydatid Cyst

Description of the Figure:

Efficacy of PAIR Technique in Hydatid Cyst Treatment: A Single Center Study

Vascular interventional Radiology

FP - 24

Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 09:40:00

Publication End Date: 2019-04-23 09:47:00

PREDICTORS OF LONG-TERM OUTCOMES AFTER POLYTETRAFLUOROETHYLENE-COVERED STENT-GRAFT REPAIR OF PERIPHERAL ARTERIAL ANEURYSMS, PSEUDO-ANEURYSMS AND ARTERIO-VEINUS FISTULAS

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³Karabuk State Hospital

Purpose: To evaluate the primary patency rate at 3 years for the infra-aortic peripheral arterial pathologies treated with polytetrafluoroethylene (PTFE)-covered stent-grafts.

Materials and Methods: Patients treated with self-expandable PTFE-covered stent-grafts for infra-aortic peripheral arterial aneurysms, pseudo-aneurysms and arterio-venous fistulas were evaluated retrospectively. A total of 48 patients (35 male, 13 females; mean age: 53.8 ±13.5) were included with 29.0± 16.5 months (median 27, range 4-70) mean follow up period. Main objective was to determine the primary patency rate at 3 years. Secondary objectives were to compare type and localization of pathology, length and diameter of the stent-grafts with primary patency rate. Kaplan-Meier test and multivariate analysis were used as the main statistical methods.

Results: Overall mean primary patency rate at 3 years was 77.10%. PTFE-covered stent-graft implantation in aneurysms had worse primary patency rate than pseudo-aneurysms and AVFs (66.6%, P=0.03; 76.9%, P=0.03; 88.2%, P=0.01, respectively). Stent-graft location, length and diameter did not affect primary patency rate (P>0.05).

Conclusion: Pathology of the lesion effected the long-term primary patency rate of PTFE-covered stent-grafts but not the stent-graft location, length or diameter.

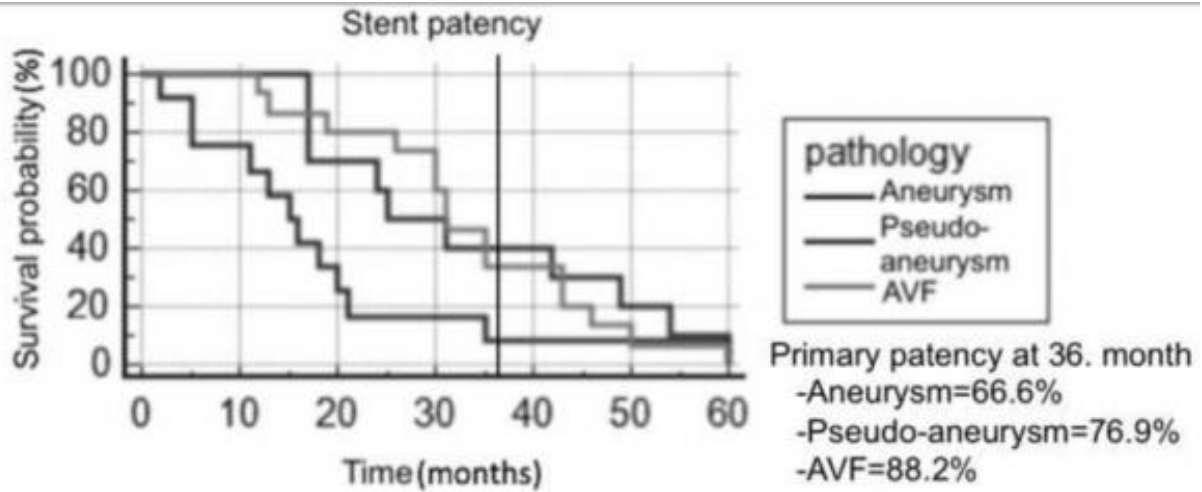
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Figure:

Description of the Figure: Stent-graft implementation in aneurysms had worse primary patency rate than pseudoaneurysms and arterio-venous fistulas at 36th month ($P<0.05$).



Number at risk

Aneurysm	12	9	3	2	1	1	0
Pseudo-aneurysm	10	10	7	5	4	2	0
AVF	15	15	12	9	5	1	0

Non-Vascular interventional Radiology

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 09:47:00

Publication End Date: 2019-04-23 09:54:00

THE IMPACT OF PRE-PROCEDURAL SHEAR WAVE ELASTOGRAPHY ON PREDICTION OF HEMORRHAGE AFTER PERCUTANEOUS REAL-TIME ULTRASOUND-GUIDED RENAL BIOPSIES

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¹Adnan Menderes University

Introduction: Renal biopsy can be an invaluable tool in the management of suspected renal pathologic conditions. Also, it has become easier and safer with the introduction of ultrasound guided biopsy. But it confers a potentially serious risk of bleeding that can lead to pain, loss of the kidney and death. Ultrasound elastography (USE) is an imaging technology sensitive to tissue stiffness and there were some studies using USE for to evaluate kidney. Although there are studies about the risk factors of hemorrhage after kidney biopsy, there is no obvious knowledge between renal elasticity and hemorrhage. In this study, we investigated the relationship between renal elasticity which was determined with USE and hemorrhage in patients who undergone renal parenchyma biopsy.

Material and Method: In total, 60 patients who were admitted between November 2017 and May 2018 were recruited and enrolled in this study. Only patients who have B mode ultrasonography and USE before renal biopsy included in the study. USE was made with S-Shearwave method. In all patients, renal biopsy was performed after the ultrasonographic and elastosonographic assessment. Renal biopsy of the left inferior pole of the kidney parenchyma was performed using an 18G biopsy needle. All controls were made immediately after biopsy and after 24 hours with ultrasonography. The patients were divided into two groups who developed and did not develop hematoma after biopsy. We investigated whether there was any difference between the two groups in terms of renal size, parenchymal thickness and parenchymal shearwave values determined by B mode ultrasonography and elastosonography

Results: Of the 60 patients, 23 (38.3%) had post-procedure hemorrhage and 37 (61.7%) had not. Mean hematomas size were 17.04 mm (7-50 mm). Only one patient need of blood transfusion and there were no deaths. The mean value of renal cortical shear wave velocity of all patients was 1.91 m/s (0,96-3.57). Patients with post-procedure hemorrhage had significantly lower mean shear wave velocity compared with patients with no hemorrhage (p.< 0.05). There were no other statistically significant demographic, ultrasonographic or laboratory value differences between two groups.

Conclusion: In conclusion, shear wave elastosonography may be a novel and feasible method for to predict to occur hemorrhage after percutaneous renal biopsy. In patients, with low shear wave velocity values have a tendency to occur hemorrhage

Vascular interventional Radiology

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 09:54:00

Publication End Date: 2019-04-23 10:01:00

THE EFFICACY OF TRANSARTERIAL EMBOLIZATION IN VAGINAL BLEEDING SECONDARY TO OBSTETRIC EMERGENCIES

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²Karadeniz Technical University, Faculty Of Medicine, Department Of Obstetrics And Gynecology

Purpose: The purpose of this study is to evaluate the efficacy, safety and role of transarterial embolization in massive vaginal bleeding secondary to obstetric pathologies which could not be controlled by conservative treatment methods.

Materials and Methods: Between January 2010 and May 2018, 22 patients with massive vaginal bleeding secondary to obstetric pathologies which could not be managed with conservative treatment methods were included in the study.

Results and Conclusion: The mean age of the 22 patients included in the study was 33.5 years (range from 20-48). Fifteen patients were referred to us from the external center for embolization. Obstetric pathologies causing massive vaginal bleeding were as following; uterine atony (13 patients), cervical pregnancy, molar pregnancy, placental pathologies and vaginal laceration. Eight of these patients had disseminated intravascular coagulation and hemodynamic instability. In addition, hemorrhage control could not be achieved in 5 patients despite hysterectomy. Patients' pre-embolization Hb levels ranged between 5 and 14 g/dl (mean 8.9 g / dl), and total blood transfusion requirements (FFP plus RBC units) were between 0 and 47 units (mean 12.1 units). Angiographic findings were vascular blush in all cases, hypertrophic UA in 17, and active contrast material extravasation compatible with active bleeding in 8. While polyvinyl alcohol (PVA) was used in all patients as embolic agent, additional glue was used in 4 patients and coil was used in one patient. The technical success was 100 %; however clinical success was %90.9. Two patients with massive vaginal bleeding secondary to uterine atony were treated with hysterectomy because they could not control bleeding despite embolization. In the hysterectomy group, technical and clinical success was achieved in all patients.

In conclusion; transarterial embolization has been evaluated as an effective and reliable treatment option as an alternative to surgery in massive vaginal bleeding secondary to obstetric pathologies. In addition, embolization is an effective treatment modality in patients with disseminated intravascular coagulation and hemodynamic instability.

Vascular interventional Radiology

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Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 10:20:00

Publication End Date: 2019-04-23 10:27:00

SUPERIOR RECTAL ARTERY EMBOLIZATION (SRAE) WITH EMBOSPERES FOR SYMPTOMATIC HEMORRHOIDAL DISEASE: RETROSPECTIVE ANALYSIS

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¹Eskisehir Osmangazi University Faculty of Medicine Department of Interventional Radiology

Purpose: To evaluate safety and efficacy of superior rectal artery embolization (SRAE) with Embospheres (Merit Medical, Holland) in symptomatic hemorrhoidal disease.

Background: Most of the patients with symptomatic hemorrhoidal disease had recurrent disease following surgery or endoscopic interventions and coil embolization.

Material and Methods: Twenty-nine SRAE procedures for symptomatic hemorrhoids with embospheres between september 2016 and september 2018. Most of them had active bleeding and anemia before the intervention. 700-900 micron particles were used in 15 patients, in 10 patients 500-700 micron ones and in 4 patients 300-500 micron ones. In 3 patients the origin of inferior mesenteric artery were occluded due to heavy atherosclerosis. The meandering mesenteric artery (or arc of riolan) to access the superior rectal artery was used. In 4 patients that 300-500-micron embospheres were used, there were a dominant middle rectal artery in either one side. Swiftninja or Embocath was used to embolize the arteries where the tip of the microcatheters were placed just before the bifurcation or trifurcation of the superior rectal arteries. The mean follow up period was 8 months. Rectoscopic examinations were performed at 3.-6. and 12. month.

Results: Technical success was 100 %. Bleeding was ceased and anemia was improved in all patients during a mean follow up of 8 months. There was no recurrent bleeding that was attributal to hemorrhoidal disease (In some patients the bleeding from erosion of the hemorrhoidal cuffs continued up to 3 month). There were no procedure related death or major morbidity. Postprocedural pain (93%), self limited small rectosigmoidal junction ulcers (10%, with 300-500-micron embospheres), acute thrombosis of hemorrhoidal veins (0.6%) were minor complications.

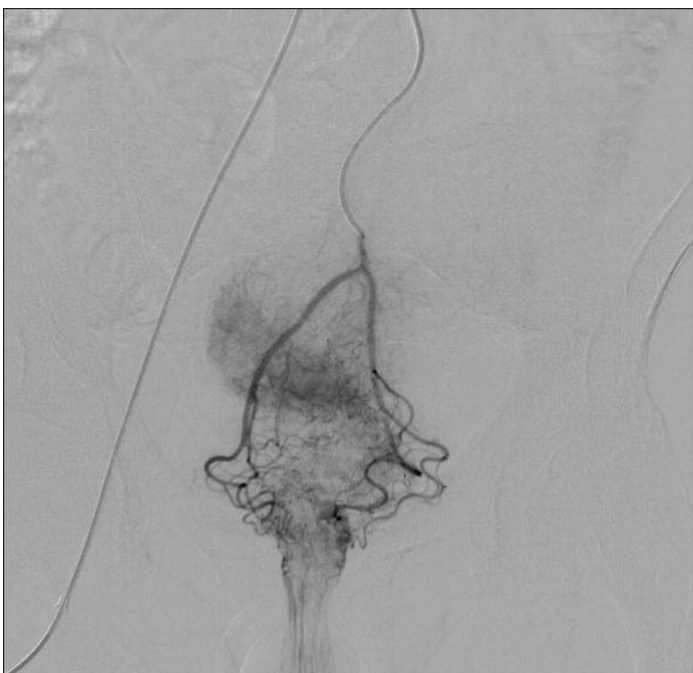
Conclusion: SRAE with 500-700 and 700-900 micron embosphere particles are safe and efficient without recurrence.

Figure:

Description of the Figure: Figure 1a: Preembolization SRA DSA angiography arterial phase



Description of the Figure: Figure 1b: Preembolization SRA DSA angiography arterio-venous phase



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Description of the Figure: Figure 1c: Postembolization SRA arterial phase



Neurointerventional Radiology

FP - 29

Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 10:34:00

Publication End Date: 2019-04-23 10:41:00

WHAT ARE THE MORPHOLOGICAL PARAMETERS ASSOCIATED WITH RUPTURE RISK IN ANTERIOR COMMUNICATING ARTERY ANEURYSMS?

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¹Ondokuz Mayıs University, Medical Faculty, Radiology Department

Introduction: The aim of this study was to investigate the relationship between whether computed tomography based morphologic parameters and the rupture status of anterior communicating artery aneurysms (AComAA).

Methods: A hospital database was retrospectively reviewed to identify patients with AComAA in the period between January 2017-September 2018. Morphologic parameters were evaluated on the 3-dimensional computed tomography angiograms. Patients were divided into Two groups: the patients with unruptured aneuysm (Group I=35 patients) and the patients with ruptured aneuysm (Group II=60 patients). Patient age, sex, morphological parameters such as aneurysm height and weight, neck diameter, aspect ratio, size ratio, parent-daughter angle, aneurysm shape and diameters of the artery were statistically compared between ruptured and unruptured groups.

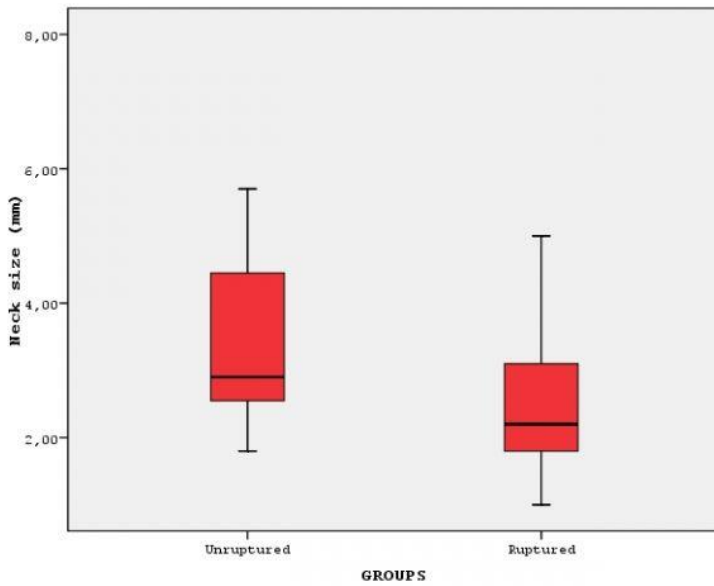
Results: Ninety-five AComAA were analyzed in this study (60 ruptured and 35 unruptured). The aneurysm neck size ($p=0.005$) and i-A1 diameter ($p=0.001$) were smaller in ruptured group than unruptured group, but aspect ratio ($p=0.001$) was higher. The number of patients with irregular shape aneurysm were higher in ruptured group ($P=0.006$). Age, sex, aneurysm height and weight, parent-daughter angle and size ratio were not different with statistical significance between two groups (Table 1).

Univariate logistic regression analysis showed ipsilaterally A1 segment diameter (OR:-2.070, CI: 0.030-0.531, $p=0.005$), aneurysm neck diameter (OR:-0.409, CI: 0.491-0.899, $p=0.008$), irregular shape (OR: 1.197, CI: 1.382-7.929, $p=0.007$) and aspect ratio (OR: 0.880, CI: 1.315-4.417, $p=0.004$) were significantly correlated with a ruptured status. Multivariate regression analysis demonstrated that only aneurysm neck diameter (OR: -0.457, CI: 0.410-0.977, $p=0.039$) were independent variables for rupture (Figure 1-Table 2).

Conclusions: AComAArapture in patient is more likely to occur in aneurysms with smaller ipsilaterally A1 segment diameter, smaller aneurysm neck diameter, irregular aneurysm shape and higher aspect ratio. Aneurysm neck diameter may be more important predictor then other factors.

Figure:

Description of the Figure: Figure 1



Description of the Figure: Table 1

Parameters	Unruptured n=35	Ruptured n=60	P value
Age (years)	61.7±12.8	56.3±16.7	0.101
Men (%)	18 (51.4)	33 (55.0)	0.736
Irregular shape (%)	12 (34.3)	38 (63.3)	0.006
Aneurysm morphology			
Neck (mm)	3.56±1.61	2.67±1.34	0.005
Height (mm)	5.47±2.80	5.40±2.42	0.910
Width (mm)	4.92±2.89	4.68±2.32	0.658
i-A1 diameter (mm)	2.21±0.32	1.95±0.37	0.001
c-A1 diameter (mm)	1.05±0.75	0.84±0.78	0.381
i-A2 diameter (mm)	1.82±0.39	1.67±0.37	0.068
c-A2 diameter (mm)	1.80±0.35	1.63±0.33	0.027
i-Parent-daughter angle	90.84±17.99	91.26±21.16	0.967
c-Parent-daughter angle	95.61±23.59	97.45±26.92	0.661
i-A1A2 ratio	1.25±0.3	1.21±0.26	0.795
c-A1A2 ratio	0.77±0.23	0.84±0.37	0.474
Size ratio	2.18 (Ctrl)	2.36±1.16	0.348
Aspect ratio	1.63±0.83	2.18±0.84	0.001

Abbreviations: i: ipsilateral; c: contralateral

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Description of the Figure: Table 2

	Univariate Logistic Regression			Multivariate Logistic Regression		
	Odds Ratio	95% CI	P Value	Odds Ratio	95% CI	P Value
Age (years)	-0.024	0.948-1.005	0.105			
i-A1 diameter (mm)	-2.070	0.030-0.531	0.005	-1.206	0.060-1.489	0.141
c-A1 diameter (mm)	-0,345	0.387-1.299	0.265			
i-Parent-daughter angle	0.001	0.978-1.025	0.930			
i-A1A2 ratio	-0.516	0.112-3.173	0.545			
Aneurysm neck (mm)	-0.409	0.491-0.899	0.008	-0.457	0.410-0.977	0.039
Aneurysm height (mm)	-0.010	0.841-1.167	0.909			
Aneurysm width (mm)	-0.037	0.818-1.135	0.655			
Irregular shape	1.197	1.382-7.929	0.007	0.966	0.910-7.590	0.074
Aspect ratio	0.880	1.315-4.417	0.004			
Size ratio	0.123	0.772-1.657	0.528			

Abbreviations: i: ipsilateral; c: contralateral

Neurointerventional Radiology

FP - 30

Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 10:41:00

Publication End Date: 2019-04-23 10:48:00

ENDOASCULAR TREATMENT OF VERTEBRAL ARTERY STENOSIS

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Aim: In this study, it is aimed to evaluate the efficacy, safety, and reliability of endovascular stenting in vertebral artery stenosis.

Materials and Methods: A total of 10 patients (3 women, 7 men) with persistent symptoms despite medical therapy who underwent the procedure of vertebral artery stenting were included in our study. The mean age of the patients was 63.9 years ranging from 47 to 78 years. Endovascular technique via femoral artery access was chosen as treatment modality and balloon expandable stents were used in the management of stenosis. Procedures were performed under local anesthesia.

Results: All patients except one had at least moderate (>50%) stenosis and median baseline stenosis rate was 65%. In one patient, stenosis of vertebral artery with a rate of 40-50% was due to tumoral invasion of right parapharyngeal mesenchymal chondrosarcoma and covered stent was implanted to maintain the lumen patency. Stent restenosis revealed in one patient and a new stent was implanted who had previously treated with endovascular stenting. In only one patient, the procedure was performed with an embolic protection device for that soft plaque in the subclavian artery to prevent an embolic event in the posterior circulation. Balloon expandable stents were used during endovascular treatment with a mean length and diameter of 21.8 mm (range: 12-39 mm) and 4.5 mm (range: 4-6 mm), respectively.

The rate of technical success was 100%. No mortalities nor major complications associated with the procedures were encountered.

Conclusion: Vertebral artery stenosis is an important entity of posterior circulation stroke. Endovascular treatment of vertebral artery stenosis is a safe and effective treatment technique, with low complication rates and high technical success, especially in patients who fail medical therapy.

Figure :

Description of the Figure: Stenosis in right vertebral artery



Description of the Figure: Balloon expandable stent implantation



Description of the Figure: Control angiography after stent implantation



Neurointerventional Radiology

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Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 10:48:00

Publication End Date: 2019-04-23 10:55:00

TREATMENT OF ANEURYSMAL SUBARACHNOID HEMORRHAGE: STENT-ASSISTED COILING VS BALLOON-ASSISTED COILING

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¹Dr Ersin Arslan Training and Research Hospital

²Karabuk University Training and Research Hospital

Purpose: The aim of this study is to compare the safety and efficacy of stent-assisted coil embolization (Stent-CE) and balloon-assisted coil embolization (Balloon-CE) methods in the endovascular treatment of ruptured intracranial aneurysms.

Materials and Methods: November 2016 to December 2018, 29 patients (12 female, 17 males; mean age 49.6 years, min-max: 28-74 years) with acute subarachnoid hemorrhage due to ruptured cerebral aneurysms that were treated with Stent-CE or Balloon-CE were evaluated, retrospectively. Fisher scale on the initial non-contrast computed tomography (CT) images and Hunt-Hess severity grading system were used. Digital subtraction angiography (DSA) with 3D images in all patients were performed to analyze aneurysm features (size, location, neck width, dome height), embolization complications and Raymond-Roy occlusion classification (RROC). Method of endovascular coiling (Stent or Balloon-assisted) were decided according to the dome-neck ratio of an aneurysm. Wide neck and unfavorable aneurysms were treated with Stent-CE. Mortality rates were noted, separately. Statistical analysis was used to compare the safety and efficacy of Stent-CE and Balloon-CE.

Results: There were 11 patients with Stent-CE and 18 patients with Balloon-CE. The average diameter of the aneurysms in Stent-CE group (mean: 9.37 mm, range: 4.3 mm – 19,8 mm) was bigger than Balloon-CE group (mean: 7.21 mm, range: 2.7 mm – 13.5 mm) but there was no statistical difference ($p>0,05$). The neck of an aneurysm was larger in patients with Stent-CE compared to patients with Balloon-CE (mean: 4.24 mm vs mean: 2.38 mm; $p = 0.004$, CI: 95%). The dome-neck ratio in the Stent-CE group was higher than the Balloon-CE group (mean: 1.4, range: 1.1 – 2.1 vs mean: 2.18, range: 1.3 – 3.5, $p< 0.000$, CI: 95%). In the Stent-CE group, only one patient had a dome/neck ratio of 2.1 and the others had a dome/neck ratio of 1.7 or less. In the Balloon-CE group, only one patient had a dome/neck ratio of 1.3 and the others had dome/neck ratios of 1.7 or more. The severity of subarachnoid hemorrhage was similar in the two groups. There was no significant difference between the two groups according to the Fisher scale and the Hunt-Hess grade ($p>0,05$). Total aneurysm occlusion (RROC I) was achieved in 9 patients with Stent-CE and 12 patients with Balloon-CE. Residual neck (RROC II) was observed in 2 patients with Stent-CE and 6 patients with Balloon-CE. There was no residual aneurysm (RROC III). There was no statistically significant difference between complication rates of Stent-CE and Balloon-CE. There was no re-bleeding or thromboembolic event in both groups. There were 2 exitus in the Stent-CE group and 1 exitus in the Balloon-CE group.

Conclusion: There is no superiority between Stent-CE and Balloon-CE over the safety, efficacy, complication rates, mortality rates, and both methods are safe and effective in the treatment of a ruptured intracranial aneurysm.

Non-Vascular interventional Radiology

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Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 10:55:00

Publication End Date: 2019-04-23 11:02:00

PERCUTANEOUS DRAINAGE FOR PERIPANCREATIC FLUID COLLECTIONS AFTER PANCREAS TRANSPLANTATION: FACTORS ASSOCIATED WITH CLINICAL OUTCOME

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Aim: To evaluate the clinical success of image-guided percutaneous drainage for peripancreatic fluid collections after pancreas transplantation and to determine factors predicting successful clinical outcomes.

Materials and Methods: Twenty-six patients (12 men and 14 women; mean age: 43.46 ± 8.92) underwent a total of 31 percutaneous drainage procedures for peripancreatic collections following transplant between 2008 and 2018. Details of percutaneous catheter drainage (access route, catheter size, transplantation-drainage interval, drain indwelling period, need for re-intervention, complications), fluid collection characteristics (size, internal structure, microbiological features, presence of fistula, amylase level), and patient characteristics (age, gender, white blood cell count, blood amylase and lipase level at presentation; presence of pancreatitis; antibiotics administration; transplanted organs) were assessed for their potential impact on the clinical success of percutaneous drainage.

Findings: The median collection size was 193 cm³ (range: 14 – 2934) and the median duration of catheter drainage was 23 days (range: 2 – 133). There were no drainage related complications. Fourteen collections (45.2%) were positive for bacterial growth, 12 collections (38.7%) contained high amylase levels, and 6 (19.4%) collections were hemorrhagic. Five patients (16.1%) were diagnosed with graft pancreatitis. Curative drainage was obtained in 20 subjects (64.5%) and partial success was obtained in 3 subjects (9.7%), resulting in an overall clinical success rate of 74.2% for drainage. There was not an association between the evaluated variables and a clinically successful outcome except for longer catheter drainage period (p = 0.006).

Conclusion: Percutaneous drainage is a safe and effective treatment option for management of peripancreatic fluid collections after pancreas transplantation.

Non-Vascular interventional Radiology

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Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 11:02:00

Publication End Date: 2019-04-23 11:09:00

CONTRIBUTION OF ACTION CAMERA IN AN INTERVENTIONAL RADIOLOGY CLINIC DAILY PRACTISE

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Introduction: Visual recording of the procedures are rarely used in daily practices in IR. Video recordings of interventions are often used in medical conferences, and the share of video-based delivered in such conferences has rapidly increased in recent times (1). This article makes an attempt to present the features and experiences concerning the use of a combination of a head or chest-mounted action camera (2).

Materials and Methods: POV camera set-ups can be manipulated by the radiologist and do not necessitate additional personnel configured in the method. An Eken H9R 4K action camera (Eken Corporation, ShenZhen, China) was used in the head-mounted camera system (Fig. 1,2).

Results: The camera was easily manipulated in the intervention room, allowing for both photo shooting and video capture from the same angle (2). It was possible to view the captures on the control display in real time.

Discussion: Video capturing is an excellent method that is used for presenting of these procedures to other people in a detailed way, data documentation for ethics- and medicolegal reasons, informing patients, improving quality, self-feedback and review. It can be used for educational and research purposes also.

References:

- 1) Makhni EC, Jobin CM, Levine WN, Ahmad CS (2015) Using wearable technology to record surgical videos. Am J Orthop 44:163–166
- 2) Workman J, Vrabel C (1999) Evaluating and selecting video equipment for the OR. AORN J 70:1025–1028.

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Figure :

Description of the Figure: Head mounted action camera image



Description of the Figure: Eken 9HR action camera



Vascular interventional Radiology

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Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 11:09:00

Publication End Date: 2019-04-23 11:16:00

EVALUATION OF ANGIOGRAPHIC SIGNS OF BRONCHIAL ARTERY IN MASSIVE HEMOPTYSIS.

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Aim: To evaluate and describe the angiographic signs (direct and indirect) of the bronchial artery in massive hemoptysis. To assess relative incidences of these signs and to know which signs are more sensitive and which are less.

Methods and Materials: We performed a retrospective and descriptive study. Patients (59 M, 22F; mean age 44.7) with massive hemoptysis (> 300 ml/24hrs) who underwent bronchial arteriography and were subsequently embolized selectively. We defined and classified the signs of diseased bronchial artery, including both direct and indirect signs. The direct sign included active extravasation. The indirect signs were classified, they were tortuosity (more than 2 turns), hypertrophy (>2mm diameter), hypervascularity, aneurysm and bronchial artery to pulmonary vasculature shunting. To assess the statistical significance of association between the causes of massive hemoptysis and angiographic signs we applied Pearson's chi-square test or Fisher's exact test.

Results: Among 81 patients, the causes of massive hemoptysis included tuberculosis (50.6%), bronchiectasis (28,3%), bronchogenic carcinoma (8,6%), pneumonia (6.1%), pneumoconiosis (3.7%) and aspergilloma (2.4%). The most frequent sign was hypervascularity (95%) followed by tortuosity (93.9%) and hypertrophy (63,4%). Bronchopulmonary shunting was the fourth most common sign (20,9%). Aneurysm was present in 8,6% of cases. We observed direct sign i.e. extravasation of contrast from the bronchial artery in 2 cases (2.4%). There was not significant correlation between the causes of massive hemoptysis and the angiographic signs.

Conclusion: Hemoptysis is a serious, life-threatening condition. Hypervascularity and tortuosity signs are the most common signs of the diseased bronchial artery. Classification of diseased bronchial artery is important to form a standardized language for bronchial artery embolization intervention.

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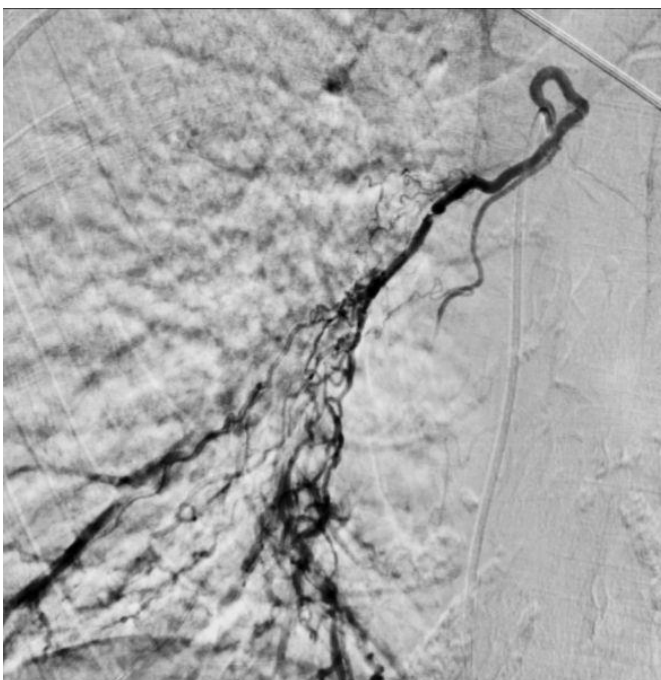
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Figure:

Description of the Figure:



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Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 11:16:00

Publication End Date: 2019-04-23 11:23:00

ENDOASCULAR MANAGEMENT OF SPONTANEOUS HEMATOMAS IN TRANSPLANT PATIENTS

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Introduction: Transcatheter arterial embolisation (TAE) has been used for many years to effectively control active hemorrhage at different anatomical locations. Spontaneous hematomas can suddenly deteriorate and become life-threatening for transplant patients. In cases of spontaneous hematomas following transplantation, it is critical to timely diagnose and intervene, as opposed to conservative management. The purpose of this study is to evaluate the efficiency of computed tomography (CT) in the treatment planning and to report the effectiveness of TAE for the management of spontaneous hematomas in transplant patients.

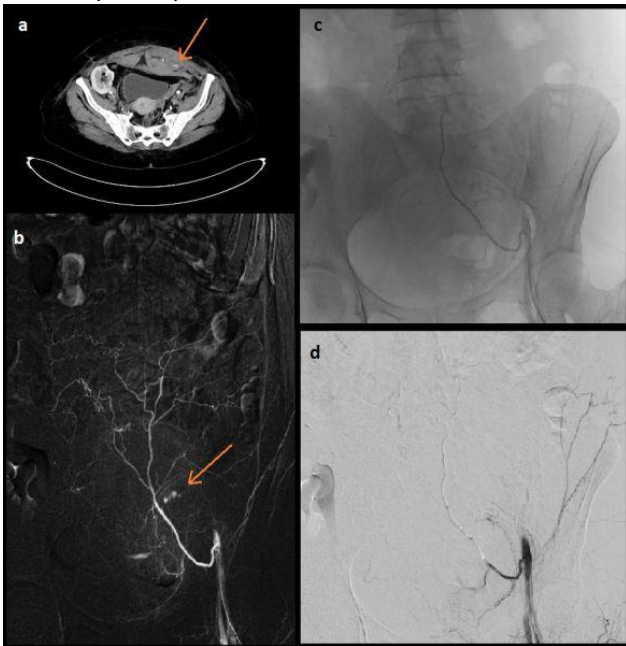
Methods: Within an 18-year period, 24 patients were referred to the interventional radiology unit and a total of 28 interventions were performed. CT and angiograms were reviewed for the location of the hematoma and presence of extravasation. The correlation of CT and angiography findings and technical and clinical success of the endovascular interventions were analyzed.

Results: Twelve patients had renal, 10 patients had liver and 2 patients had cardiac transplantations. Active leak of contrast material was detected on 21/25 CT scans. Angiography confirmed the CT scans in 23 cases. In the remaining 2 cases, angiograms revealed extravasation which CT showed no arterial bleeding. Embolization procedures were performed to all arteries with extravasation on angiograms. Empiric embolization of the corresponding artery on the CT was performed when there was persistent bleeding with no apparent extravasation on CT or angiograms (n=2). Source of bleeding was superior epigastric artery in 8, inferior epigastric artery in 5, circumflex iliac artery in 4, an internal iliac artery branch in 4, lumbar artery in 4, inferior phrenic artery in 2, deep femoral artery branch in 1 and superior intercostal artery in 1 patient. Embolization procedures were performed with N-Butyl 2-Cyanoacrylate (NBCA) diluted with iodized oil in 19 procedures and NBCA and coils in 2 procedures. Embolization with polyvinyl alcohol (PVA) particles was performed in 3 patients, PVA particles and coils in 2 procedures and microspheres (HydroPearl, Terumo) and gelatin sponge in 2 procedures due to lack of iodized oil. The outcome was 100% successful in technical terms, regarding all 28 patients. Interventions were performed; once on 21 patients (87.5%), twice on 2 patients, (8.3%) and three times on 1 patient (4.2%). We did not experience any complications which relates to the patients' comorbidities or the embolization procedure such as mistarget embolization, reflux of the glue to the innocent vessels or catheter adherence. None of the patients died due to a progression of the hematoma.

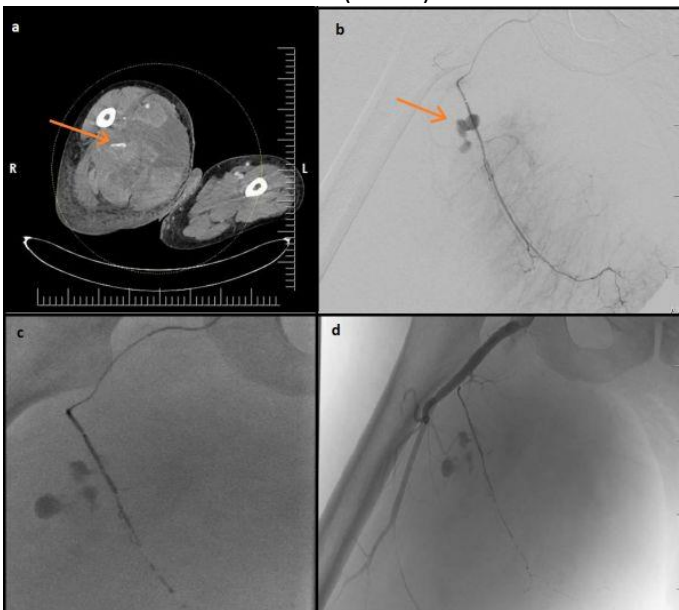
Conclusion: TAE is an effective and safe treatment modality for transplant patients who has spontaneous hematomas. CT is valuable in identifying the bleeding source and its anatomical relationships, may enhance our intervention abilities to become quicker, more effective and more secured.

Figure:

Description of the Figure: Kidney transplant patient with rectus sheath hematoma a. CT shows active extravasation (arrow) b. Selective angiography of the left inferior epigastric artery shows extravasation from a branch (arrow) c and d. Embolization with NBCA



Description of the Figure: Liver transplant patient with right sided thigh hematoma. a. Contrast enhanced CT shows active extravasation into giant hematoma(arrow) b. Selective angiography of the deep femoral artery branch shows extravasation (arrow) c and d. Embolization with NBCA



Neurointerventional Radiology

FP - 36

Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 11:23:00

Publication End Date: 2019-04-23 11:30:00

DETERMINING THE EFFECTS OF PLANNED INFORMATION TRAINING ON THE ANXIETY IN THE PRE-OPERATIONAL PERIOD IN PATIENTS WITH NEUROVASCULAR ANGIOGRAPHY

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Objective: The aim of this study was to investigate the effect of planned pre-treatment training on anxiety levels of patients in patients undergoing neurovascular angiography.

Methods: The study was performed on 60 patients who underwent diagnostic angiography in the Department of Interventional Radiology of a university hospital. 30 patients were provided with planned informative training (one-to-one interviews and brochures). In the collection of data; Information Form including demographic data, State Anxiety, Trait Anxiety Scale were used. The patient's age, gender, education level, and previous angiography were questioned in the Information Form. In the evaluation of the data; percentage distributions were used. As the study continues, the results of the t test, Kruskal-Wallis, Mann Whitney-U test, which are the statistical tests, will be used in the congress presentation.

Results: The mean age of the patients who were educated in education was 58.9 years. Patients with primary education (66.7%) and patients with work life (56.7%) were the majority of the group. The state-trait anxiety score was found to be 4.44. In our study, the mean score of State-Trait Anxiety was lower in patients who had not undergone previous angiography (4.37). The mean age of the patients who are not scheduled for informative education is 56.1 years. Patients with primary education (70%) and patients without work life (56.7%) were the majority of the group. The mean score of state-trait anxiety was found to be 4.48. In our study, the mean score of State-trait anxiety was higher in patients who had not undergone angiography (4.49).

Conclusions: State-trait anxiety scores of the patients were found to be lower in the patients who were given planned informative education.

Vascular interventional Radiology

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Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 11:30:00

Publication End Date: 2019-04-23 11:37:00

RETROGRADE TIBIOPEDAL ACCESS IN TREATMENT OF CRITICAL LIMB ISCHEMIA PATIENTS WITH COMPLEX INFRAINGUINAL DISEASE

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Background: Increased endovascular experience demonstrated that classical antegrade approach fails lesion crossing in 20% of the procedures which results failure. Retrograde tibiopedal access is becoming widely used and adopted in experienced centers as an alternative treatment strategy. Data regarding this technique is still growing.

Purpose: In this study, we report our single center experience of retrograde tibiopedal access and evaluate the safety and efficiency of the tibiopedal access in endovascular treatment of infrainguinal complex lesions.

Materials and Methods: 68 patients who underwent endovascular treatment between 2016 and 2018 were retrospectively evaluated. All patients had critical limb ischemia (Rutherford \geq 4) and previous endovascular antegrade lesion crossing was failed. All tibiopedal accesses performed under ultrasound guidance. Tibiopedal access success, lesion crossing success, angiographic results and complications were evaluated.

Results: 72 limbs were treated during the study period and totally there were 80 tibiopedal access attempts. Anterior tibial artery was punctured in 28 (35%) cases, posterior tibial artery was punctured in 48 (60%) cases and dorsalis pedis artery was punctured in 4 (5%) cases. 36 (%45) access attempts were performed on occluded pedal arteries. 76 (95%) of the attempts were successful. Among those with successful access achieved, lesion crossing was successful in 66 (82,5%) cases. Angiographically direct increase in flow established in 39/66, indirect increase in flow established in 13/66 of the patients. There was no change in flow in 14/66 of the patients. Access related complications noted in 3 patients (3,75%). There was one (1,25%) access site thrombosis and in two (2,5%) patients there was decrease of out flow due to vasospasm. There was no hematoma or dissection.

Conclusion: Tibiopedal access is safe and effective in CLI patients with infrainguinal complex lesions when antegrade crossing of the lesions were not possible.

Non-Vascular interventional Radiology

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Publication Hall: Meeting Room A

Publication Start Date: 2019-04-23 11:37:00

Publication End Date: 2019-04-23 11:44:00

THE ULTRASOUND-GUIDED COAXIAL TECHNIQUE AND MULTIPLE PANCREAS MASS BIOPSIES THROUGH THICK NEEDLES: RATES OF SUCCESS AND COMPLICATIONS

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Purpose: With this study, we aim to determine the rates of success, reliability and complications in multiple biopsies of pancreas masses conducted with the ultrasound-guided coaxial technique.

Material and Method: The ultrasound-guided biopsies of 207 patients with an inoperable pancreas mass who refused to have a surgical treatment between 2014 and 2019 were retrospectively evaluated. The biopsy was conducted in all the patients using a 17 G coaxial entry needle and a 18 G full-automatic biopsy needle, accompanied by ultrasonography. The success rate of the coaxial method and its complications were evaluated.

Findings: Histological samples sufficient for a diagnosis were obtained from 203 of the 207 patients. Biopsy procedure was repeated in four patients. In three cases, biopsy was applied via transliver whereas in 47 patient's biopsies was performed via transtomach. Peripancreatic self-limiting hematoma was detected in 2 patients; pancreatitis was detected in one patient the day after the prosedure. Peritonitis wasn't detected in any of the patients.

Result: The coaxial technique, in which a larger external guiding needle is employed in the mass biopsies of pancreas, offers additional advantages for deep and hardly accessible lesions. This technique increases the number of pieces obtained for pathological analysis and decreases the rates of complications and the risks of insertion which could arise particularly along the needle track. Pancreatic biopsies can be performed through the coaxial technique without causing peritonitis or bleeding complications, when required, by using the liver and transgastric tract as well.

Non-Vascular interventional Radiology

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Publication Hall: Meeting Room A

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Publication End Date: 2019-04-23 11:51:00

BREAST CANCER IN SAKARYA, TURKEY: ANALYSIS OF CLINICAL AND HISTOPATHOLOGICAL CHARACTERISTICS

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Aim: Breast cancer is the most common type of cancer in women in Turkey as well as in the world. It is the most common cause of death by cancer. Although in literature there are numerous studies, in our country a detailed and systematically prepared data of women with breast cancer have not been explicitly presented up to today. To evaluate the women with breast cancer in Sakarya, Turkey in terms of their stages, age distribution, menopausal status, histological types and levels as well as estrogen receptors (OR), progesterone receptors (PR) and human epithelial receptors (HER 2) existence in the light of literature.

Materials and Methods: This study involves 239 female patients, admitted to our interventional radiology clinic between May 1st, 2008-July 1st, 2018 and retrospective analysis of clinical and pathological data. These cases have been analyzed in terms of age, menopausal status, clinical and pathological stages, histological types and grade, estrogen (OR), progesterone (PR) and HER-2 receptors and molecular weights.

Results: The mean age of diagnosis of these patients was 46.4 (\pm 12.6; range 16-84) and 7.5% of them were under the age of 30 and 33% were over 50 years old. At the time of diagnosis, it was seen that the cancer prevalence reached the maximum level with a value of 19.8% in the 35-39 age group; however, it was lower in the 45-49 age group with 12.2%. Yet, the incidence was much higher at the 50+ age group with 33%. When the pathological stages were analyzed; 5% were in stage 0, 11% were in stage I, 71% were in stage II, 10% were in stage III and 3% were in stage IV of breast cancer. Histological types of invasive breast cancer involved invasive lobular cancer as well as invasive ductal carcinoma. 89.4% of the cases were histologically grade II. When molecular subtype analyzes were done, estrogen receptors (OR) were found in 68% of the patients, progesterone receptors (PR) in 57% and HER-2 receptors in 21%.

Conclusion: We have concluded that registered patients at our database had breast cancer at a younger age, were at a more advanced stage compared to literature and the prognostic factors were more negative.

Resources

1. Ozmen V, Anderson BO. The challenge of breast cancer in low- and middle-income countries—implementing the breast health global initiative guidelines. *US Oncology* 2008;76-2. 2.Ozmen V. Breast Cancer in Turkey. İstanbul: Yelken Basım Yayın Sanayi ve Ticaret Ltd. Sirketi, 2013.
2. Ferlay J, Shin HR, Bray F, Forman D, Mathers C, Parkin DM. Estimates of worldwide burden of cancer in 2008: GLOBOCAN 2008. *Int J Cancer* 2010; 127:2893-2917. (PMID: 21351269) [CrossRef]

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3. 7. American Joint Committee on Cancer. AJCC Cancer Staging Manual, chapter 32, Springer, Berlin, Germany, 7th edition, 2010. Available from: URL: <http://www.scribd.com/doc/41422083/Complete-AJCC-CancerStaging-Manual-7e-Text>.
4. Wagner G. History of cancer registration. 1991. Available from: <http://www.iarc.fr/en/publications/pdfs-online/epi/sp95/sp95-chap2.pdf>
5. Eser SY. Cancer registry and cancer data centers. In: Murat Tuncer, ed. Cancer Control in Turkey. Ankara: Onur Matbaacılık, 2008.
6. Ozmen V. Breast cancer in Turkey and in the world. J Breast Health 2008; 4:6-12.
7. Dillon DA, Guidi AJ, Schnitt SJ. Pathology of invasive breast cancer. In: Harris JR, Lipmann ME, Morrow M, and Osborne CK, eds. Diseases of the Breast. Philadelphia: Wolters Kluwer/Lippincott Williams&Wilkins, 2010.
8. O'Brien KM, Cole SR, Tse CK, Perou CM, Carey LA, Foulkes WD, Dressler LG, Geradts J, Millikan RC. Intrinsic breast tumor subtypes, race, and long-term survival in the Carolina Breast Cancer Study. Clin Cancer Res 2010; 16; 6100-6110. (PMID: 21169259) [CrossRef].

Histological Grade

Grade	0	I	II	III	IV
%	5	11	71	10	3

Breast Cancer Age Distribution

Age	Below 30	30-34	35-39	40-44	45-49	Above 50
%	7.5	9.8	19.8	17.7	12.2	33

Non-Vascular interventional Radiology

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 10:20:00

Publication End Date: 2019-04-23 10:27:00

TRU-CUT PERCUTANEOUS BIOPSY IN PLEURAL-BASED LUNG LESIONS: OUR CLINICAL EXPERIENCE WITH ULTRASOUND

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Purpose: Percutaneous transthoracic core biopsy is an accepted and widely used method of establishing the etiology of lung masses. Experiences with us-guided tru-cut percutaneous biopsy in pleural-based lung lesions are presented.

Material and methods: A total of 101 patients (76 male, 25 female) who underwent biopsy in the last two years were included this study. The mean age of the patients was 63,6 and ranged between 45-85 years. The mean size of the lesions is 57,1 mm and ranged between 20-149 mm. 14 of these patients underwent re-biopsy but only the firsts included in statistical analysis. All us-guided biopsies were performed with an 18 G tru-cut needle that can sample 2 cm of tissue. Three samples were taken from each lesion.

Results: The lesions were observed more frequently in the upper lobes, but in terms of the location of the lesion no statistically significant difference was observed. Histopathologically, 92 (91%) specimens were found to be adequate. Of these; 83 were reported as malignant (6 small cell carcinoma, 37 non-small cell carcinomas, 40 metastasis) and 9 were reported as benign or non-malignant. In 9 cases, the specimen was reported as inadequate. 8 of the 9 cases, histopathologically reported as benign or non-malignant but CT findings suggesting malignancy, re-biopsied and all were reported as malignant. 6 of 9 histopathologically inadequate cases were re-biopsied and all of them were reported as malignant. 3 (2,9%) patient developed minor hemoptysis and 4 (3,9%) had pneumothorax. There was no pneumothorax necessitating chest tube placement, and no hemothorax, air embolism or death.

Conclusion: Ultrasound guided percutaneous transthoracic biopsy is feasible, cheap and safe method. Therefore, ultrasonographic evaluation is recommended all cases who have pleural based lung lesions according to computerized tomography.

Non-Vascular interventional Radiology

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 10:27:00

Publication End Date: 2019-04-23 10:34:00

CT-GUIDED TRU-CUT PERCUTANEOUS BIOPSY OF LUNG LESIONS: OUR CLINICAL EXPERIENCE WITH COAXIAL TECHNIQUE

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Purpose: Percutaneous transthoracic core biopsy is performed in patients with indeterminate pulmonary nodule or mass to confirm or refute the presence of malignancy, and where malignancy is confirmed, to characterize the tumor further. Experiences with ct-guided tru-cut percutaneous biopsy of lung lesions with coaxial technique are presented.

Material and methods: A total of 213 patients (161 male, 52 female) who underwent biopsy in the last two years were included this study. The mean age of the patients was 59,6 and ranged between 37-80 years. The mean size of the lesions is 41,2 mm and ranged between 9-80 mm. 20 of these patients underwent re-biopsy but only the firsts included in statistical analysis. All biopsies were performed with a CT guided 19 G coaxial needle and a 20 G tru-cut needle that can sample 2 cm of tissue. Three samples were taken from each lesion.

Results: Histopathologically, 204 (95,7%) specimens were found to be adequate. Of these; 170 were reported as malignant (20 small cell carcinoma, 99 non-small cell carcinomas, 51 metastasis) and 34 were reported as benign or non-malignant. In 9 cases, the specimen was reported as inadequate. 15 of the 34 cases, histopathologically reported as benign or non-malignant but CT findings suggesting malignancy, re-biopsied and all were reported as malignant. Five of 9 histopathologically inadequate cases were re-biopsied and 4 of them were reported as malignant and 1 was benign. The complication rates were as follows: pneumothorax: 12,6% (27/213), pneumothorax necessitating chest tube placement: 0,46% (1/213), focal intrapulmonary hemorrhaging: 13,1% (28/213), hemoptysis: 3,7% (8/213) and there was no hemothorax, air embolism or death.

Conclusion: CT-guided coaxial transthoracic tru-cut biopsy can be used as the first method in the sampling of lung lesions due to low complication rate, easy application, good patient tolerance, and not necessitating general anesthesia and hospitalization.

Oncologic interventional Radiology

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 10:34:00

Publication End Date: 2019-04-23 10:41:00

RADIATION SEGMENTECTOMY WITH YTTRIUM-90 FOR HEPATOCELLULAR CARCINOMA: EFFICACY AND SAFETY

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²Department Of Nuclear Medicine, Balcali Hospital, Cukurova University, Adana, Turkey

Aim: Hepatocellular carcinoma (HCC) is the most primary malignant tumor of liver. Depending on the stage of disease, different treatment methods including transarterial radioembolization (TARE) may be applied. Radiation segmentectomy (RS) is a novel and different type of the TARE. The idea of RS is to avoid radiation-associated liver toxicity by delivering very high dose (median dose up to 512 Gy) of Yttrium-90 (⁹⁰Y) selectively to treat tumor that involves one or two hepatic segments. The aim of this study was to investigate efficacy and safety of RS with ⁹⁰Y in patients with HCC.

Material and Methods: This single-center study was conducted retrospectively with approval of the Institutional Clinical Research Ethics Committee. This study included ineligible for surgical treatment patients with HCC who underwent RS between 2015 and 2018 years due to the tumor council decision. In all patients, tumor-feeding vessels were selectively catheterized using standard angiographic technique and then previously calculated desired dose of ⁹⁰Y was injected. Liver function tests before and after procedure, local progression free survival (PFS) durations were noted. Radiological response to treatment was estimated by using Modified Response Evaluation Criteria in Solid Tumors (mRECIST) every 3 months. Alpha-fetoprotein (AFP) values were compared before treatment and 3 months later. Adverse effects were estimated according to Common Terminology Criteria for Adverse Events (CTCAE). Kaplan-Meier survival analysis, Fisher's exact test, Wilcoxon test, Mann-Whitney U test were used for statistical analysis. *P* values < 0.05 were considered significant.

Findings: RS was performed on 21 consecutive patients (mean age 65.0±5.4 years; 71% female). Seventeen patients (81%) had tumors larger than 5 cm and four patients (19%) had tumors sized 2-5 cm. Applied mean tumor dose of ⁹⁰Y was 216.5 Gy±55.9 Gy. Median follow-up period was 15 months (range 4-42 months), and local PFS was 28 months (range 4-42 months). Complete response rates were 43% at 3rd month and 41% at 6th month. Partial response rates were 33% at 3rd month and 18% at 6th month. Before treatment, mean AFP values were 3174±9195 IU/mL, and at 3rd month follow-up mean AFP values were 234±784 UI/mL. These changes were statistically significant (*P*=0.018). Most patients (%65) had minor complications (grade I/II CTCAE) such as nausea, vomiting or headache after treatment but no major complications was detected during follow-up period. There were no significant changes in liver functional tests before and after procedure.

Conclusion: Radiation segmentectomy for patients with HCC ineligible for surgical treatment is efficacious and safe method due to prevention of radiation-associated liver toxicity. Significant decrease of AFP values on 3rd month follow-up indicates that radiation segmentectomy is effectively reducing tumor burden.

Non-Vascular interventional Radiology

FP - 44

Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 10:48:00

Publication End Date: 2019-04-23 10:55:00

IS ENDOBILIARY RADIOFREQUENCY ABLATION WITH METALLIC STENT PLACEMENT SAFE AND EFFECTIVE IN PATIENTS WITH PERIHILAR CHOLANGIOCELLULAR CARCINOMA?

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Purpose: To demonstrate safety and efficacy of endobiliary radiofrequency ablation (RFA) with metallic stent placement in patients with cholangiocellular carcinoma.

Material and Methods: Twelve patients (M/F: 9/3) with perihilar cholangiocarcinoma (type 4 according to Bismuth-Corlette classification) underwent percutaneous endobiliary RFA with metallic stenting between November 2014 and January 2017. Median age was 63 years (range from 37 to 89 years). All patients had a life expectancy more than 3 months, and were accepted inoperable according to their health status, imaging and laboratory findings during diagnosis. A multistep procedure including firstly percutaneous biliary drainage, then check cholangiography within a week, and subsequently a final session with the application of endobiliary RFA followed by metallic stenting was performed. The clinical recovery and liver function tests were monitored at the end of the first week, first month, third month, and then with three-month intervals. During their visits, patients were evaluated for any sign of biliary obstruction and control abdominal sonography was performed with the same intervals. CT and MRI were performed if necessary.

Results: All the RFA procedures were performed successfully with metallic stenting in the same session. Biliary decompression was obtained in all patients after the procedure. The mean baseline serum bilirubin level was 7.95 ± 2.25 mg/dL (range from 5.2 to 12.3 mg/dL). The mean serum bilirubin level was 2.77 ± 0.82 mg/dL (range from 1.4 to 4.1 mg/dL) at the end of the first week. The mean tumoral stricture length was 39.3 mm range from 15 mm to 52 mm. Preablation mean luminal diameter was 1.78 mm (ranging 0.5-4 mm) and postprocedural mean luminal diameter was 7.85 mm (ranging 5-10 mm). Totally 24 self-expandable stents were inserted, and additional stenting was performed in 2 of the 5 patients with re-obstruction during follow-up. No major complication such as pancreatitis, biliary duct perforation or abdominal hemorrhage was observed following the procedure. The mean follow-up time was $293,1 \pm 76,7$ days. Six of the patients died during the follow-up period. Four of the patients died because of progression of the primary disease, 1 died from myocard infarction, and 1 due to septicemia. Mean primary stent patency was 228.8 ± 36.4 days ranging between 173 and 284 days. Five patients presented with stent occlusion during follow-up. Stent occlusion due to tumoral ingrowth was detected in all of them. All of these patients underwent another RFA session and stent patency was achieved in all of them. For the patients with tumor outgrowth, additional stent placement was required for biliary patency (n=2). Mean secondary patency among the patients who had undergone additional RFA was 228.8 ± 77.7 days, ranging between 246 and 441.

Conclusion: Percutaneous RFA with metallic stent placement is a safe and effective method for relief of malignant biliary obstruction in perihilar cholangiocarcinoma.

Non-Vascular interventional Radiology

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 10:55:00

Publication End Date: 2019-04-23 11:02:00

OUTCOMES FROM PERCUTANEOUS ABSCESS DRAINAGE IN PATIENTS WITH PERFORATED APPENDICITIS

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Purpose: To evaluate outcomes of ultrasound (US) guided percutaneous abscess drainage in patients with perforated appendicitis.

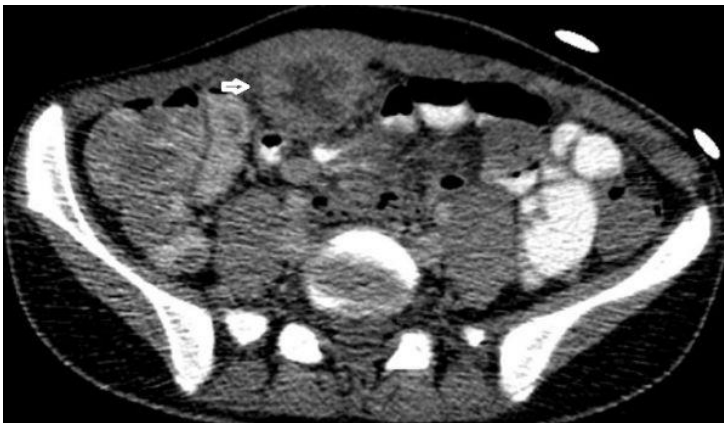
Methods: Pre-interventional computed tomography (CT) examinations of patients (n=51) who had abscess formation due to perforated appendicitis were reviewed retrospectively. A total of 10 patients [5(50%) women and 5(50%) men] with a mean age of 45±23 (SD) years who underwent US guided percutaneous abscess drainage were enrolled in this study. Abscess volume, location, catheter duration and follow-up results were recorded. The treatment effectiveness of US guided percutaneous abscess drainage was investigated.

Results: A total of 10 patients were included. Abscess formations were in right lower quadrant (n=7) and deep pelvic area (n=3). The mean abscess volume was 190 ± 218 mm³ (range: 20 - 626). The mean catheter duration was 11.5 ± 8.4 days (range: 3 - 30). Three patients (3/10, 30%) were treated non-surgically with complete response. In remaining seven patients (7/10, 70%), surgical management was required because of recurrent abscess (3/10, 30%) and progression in abscess volume (4/10, %40).

Conclusion: Because of our low complete response ratio, we recommended US guided percutaneous abscess drainage in perforated appendicitis for some selected patients with high risk surgery.

Figure :

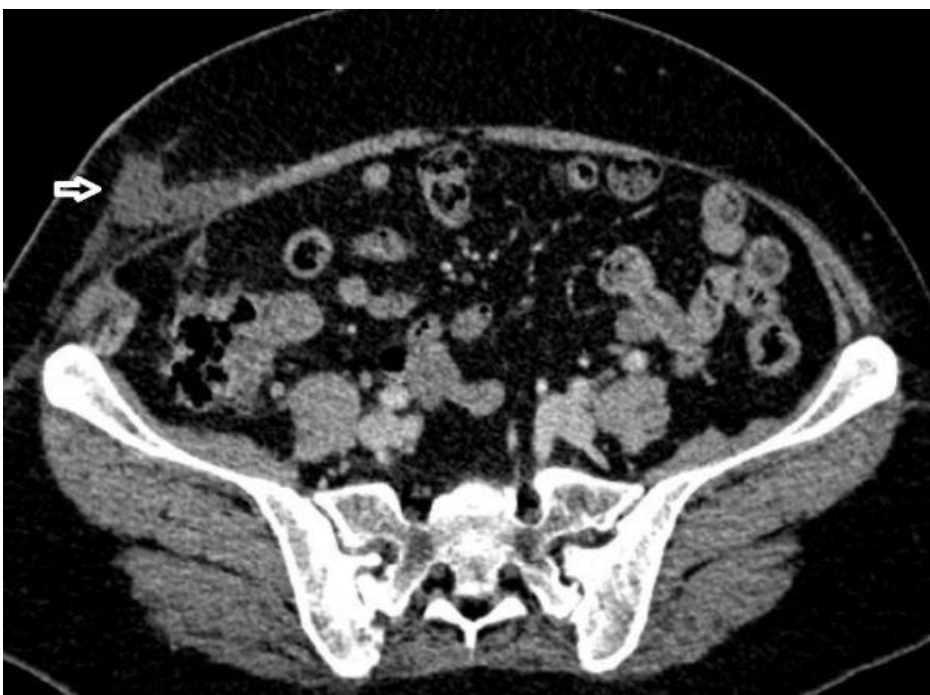
Description of the Figure: Figure 1a: Abscess formation (arrow) on CT in 18-year-old man with perforated appendicitis before percutaneous drainage.



Description of the Figure: Figure 1b: Progression in abscess volume (arrow) in 18-year-old man with perforated appendicitis 17 days after percutaneous drainage.



Description of the Figure: Figure 2: Recurrent abscess formation (arrow) in catheter trace 6 months after percutaneous drainage in 51-year-old woman with perforated appendicitis.



Oncologic interventional Radiology

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 11:02:00

Publication End Date: 2019-04-23 11:09:00

THE EFFICACY AND SAFETY OF MICROWAVE ABLATION IN HEPATOCELLULAR CARCINOMA

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Aim: Hepatocellular carcinoma (HCC) is the most common primary malignant tumor of the liver. The 5-year survival rate in the advanced stage of HSCs is less than 5%. The use of microwave ablation (MWA), which is among the curative treatment methods in the early stage of HCC, has been increasing in the last years due to its theoretically shorter procedure time. The aim of this study was to investigate the efficacy and safety of MWA in HCC.

Material and Methods: This single-center retrospective study was conducted with the approval of the Clinical Research Ethics Committee. The study included consecutive patients not suitable for surgical treatment with tumor number <3, tumor size <5 cm, for whose MWA was performed between March 2013 and November 2018. Patients with resistant ascites, international normalized ratio (INR)> 1.5 and platelet count <50.000/mm³ were excluded from the study. After MWA, patients were followed up at 1st month and thereafter at 3 months intervals. Alpha-fetoprotein (AFP) values and dynamic MR images were recorded. Treatment response rates (Modified Response Evaluation Criteria in Solid Tumors [mRECIST]), overall survival (OS), progression-free survival (PFS) and time-to-progression (TTP) were evaluated. Statistical analysis was performed using SPSS IBM v20.0 software with Kaplan-Meier and Breslow tests. *P* value <0.05 (confidence interval 95%) was considered as significant.

Findings: In this study, 47 patients (40% [85% male]) with a total of 68 tumors were evaluated. The ages of the patients were between 44 and 78 years (median 64). Median OS duration was 38 months (range 30-45 months), median PFS was 26 months (range 9-42 months), and median TTP was 10 months (range 4-15 months). When the patients were divided into two groups according to their AFP values, median OS of patients with AFP values <20 ng/mL was 39 months (range 29-48 months), and 21 months (range 31-46 months) with those above 20 ng/mL. The effects of AFP on OS were statistically significant (*P*=0.015). When patients were divided into different groups according to the number of tumors, a significant difference was found between the groups in terms of OS, PFS and TTP (*P*=0.01, *P*=0.005, *P*=0.002, respectively). The median OSs were 46 months (range 43-48 months), 33 months (range 24-41 months) and 14 months (range 2-17 months) in patients with 1, 2 and 3 tumors, respectively. According to the mRECIST criteria, 43 (63%) patients had complete response, 10 (14%) had partial response and 53 (77%) had objective response. Major complication after MWA (namely, liver abscess) was detected in 1 patient (0.01%).

Conclusion: Microwave ablation is an effective and safe treatment method for hepatocellular carcinoma. The change in AFP values during follow-up is an strong indicator for the effectiveness of MWA. The number of tumors is an important criterion in patient selection.

Oncologic interventional Radiology

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Publication Hall: Meeting Room B

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Publication End Date: 2019-04-23 11:16:00

EFFECT OF ENDOBILIARY RADIOFREQUENCY ABLATION IN INOPERABLE BILIARY TRACT OBSTRUCTION DUE TO MALIGNANCY. FIRST EXPERIENCES

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Aim: The common technique for percutaneous treatment of malignant biliary obstruction is metallic stenting. Endobiliary radiofrequency ablation (EB-RFA) procedure has been carried out as an additional treatment method. The aim of this study is to determine the efficacy of EB-RFA on stent patency in the palliative treatment of unresectable malignant biliary obstruction.

Material and Methods: Between March 2017 and December 2018, 50 patients with different histopathological diagnoses who developed malignant biliary obstruction secondary to unresectable tumor were included in the study. The patients were divided into two groups as EB-RFA treated and untreated. Firstly, percutaneous transhepatic biliary drainage procedure was used. In 25 patients, temperature-controlled EB-RFA catheter was inserted over the guidewire. 120s of ablation (target temperature 80°C, 7–10 W) was performed. Self-expandable metallic stent was used after ablation and stenotic segment was dilated with appropriate balloon. An internal external biliary drainage catheter was placed after the procedures. Endobiliary stenting and balloon dilatation were applied to 25 patients in the other group without EB-RFA. Follow-up was performed at 1 week, 1th, 3th, 6th months and every 6 months after the procedure. Postoperative catheter removal was performed under fluoroscopy control and computerized tomography. Stent patency between two groups was compared retrospectively. P <0.05 was considered statistically significant.

Fidings: During the follow-up period, bilirubin levels at 1th month were reduced to normal limits (<2 mg / dl) in all living patients (1 patient in the first month, died due to his/her current disease) and the clinical success was 96%. During the follow-up period, 1 out of 24 patients discontinued follow-up, 8 died and 15 of them were still alive. According to the statistical analyzes, the cumulative median overall survival was 121 (25-442) days, and the median stent patency was 175 (54-442) days. One patient in follow-up period (4.2%) developed instent regrowth after 7.5 months and underwent percutaneous EB-RFA. Sufficient technical success was achieved in all patients. No mortality was detected directly with EB-RFA. In 4 of 25 patients (16%) who had only stenting and balloon dilatation performed, instent regrowth was observed and instent EB-RFA and stenting were performed on them. Stent patency was significantly different (p <0.05) than the control group, and complication rates were similar (p > 0.05).

Conclusion: EB-RFA is a safe and effective method of prolonging stent patency by creating a limited ablation zone in the tumor load in and around the biliary tract. Although it is revealed that it significantly inhibits instent regrowth, randomized and controlled studies with more patient series are needed for evaluating long term patency.

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Figure:

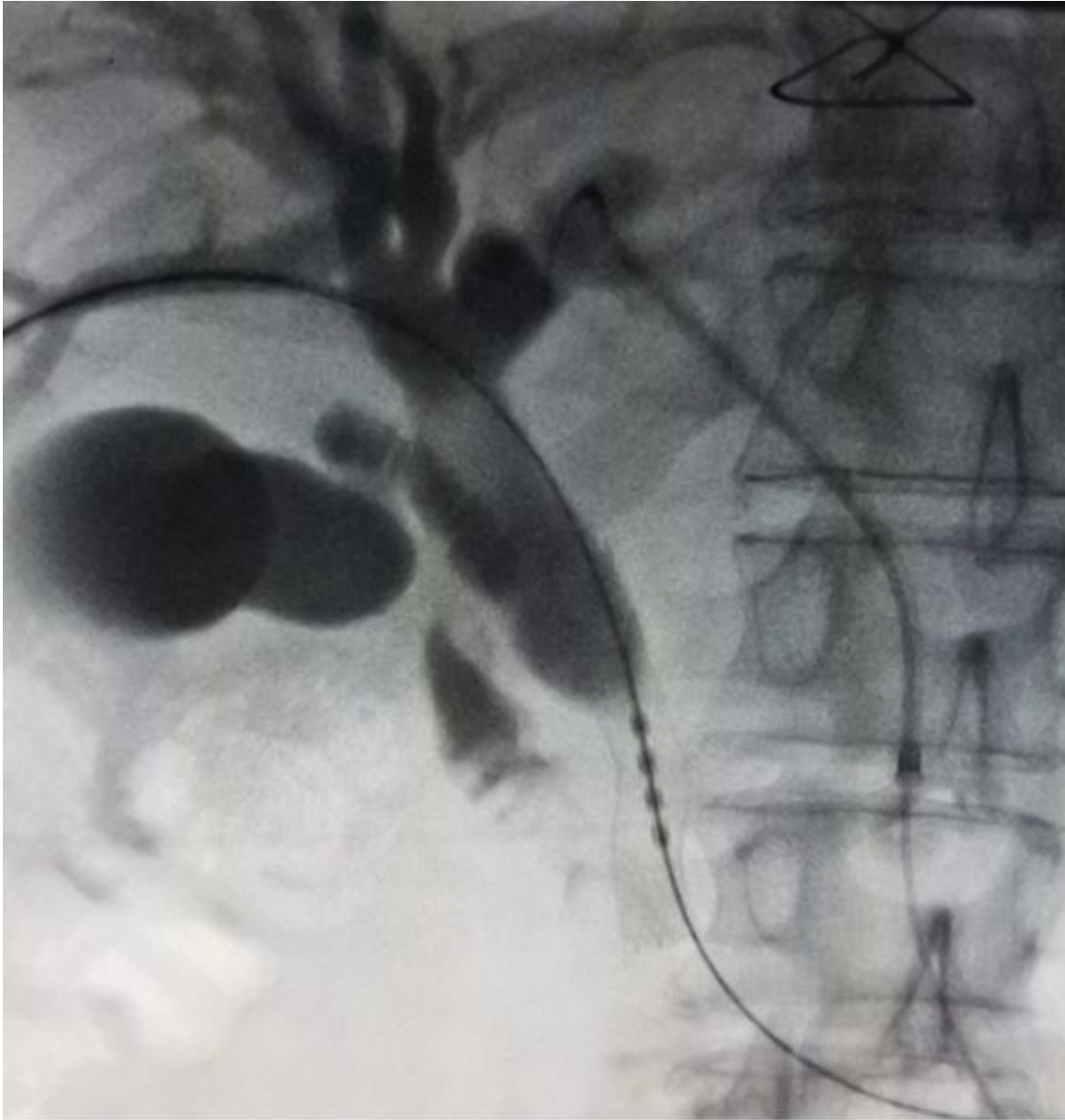
Description of the Figure: Malignant obstruction in biliary tract



Description of the Figure: Endobiliary radiofrequency ablation



Description of the Figure: Instent endobiliary radiofrequency ablation



Oncologic interventional Radiology

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 11:23:00

Publication End Date: 2019-04-23 11:30:00

TRANSARTERIAL EMBOLIZATION WITH BLEOMYCIN-LIPIODOL MIXTURE IN SYMPTOMATIC GIANT LIVER HEMANGIOMAS

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Aim: Hemangiomas are the most common benign tumors of the liver and constitute 1-20% of all liver neoplasms. Giant liver hemangiomas (GLH) (> 5 cm) may be symptomatic and have a risk of spontaneous rupture in 1-4% of patients. There is no consensus on the optimal treatment of hemangiomas. An alternative method for the treatment of liver hemangiomas is transarterial embolization with bleomycin-lipiodol mixture (TEBL). The aim of this study was to investigate the efficacy and safety of TEBL in GLH.

Material and Methods: This study was planned as a single-center retrospective investigation and was approved in accordance with the Declaration of Helsinki by the approval of the Ethics Committee. The study was conducted between August 2015 and November 2018 and included 19 GLH patients who underwent BLTE procedure in the Interventional Radiology Department with the decision of the tumor council because the disease was symptomatic. Dimensional and volume absolute and percentage changes, minor and major complications were recorded and statistically analyzed. All analyses were performed using IBM SPSS statistics version 20.0 statistical software package. The statistical level of significance for all tests was considered to be 0.05. P values <0.05 were considered significant.

Findings: BLTE procedures were performed on 19 GLH patients (12 women, 63.2%) between 33 and 68 years-old (mean 49.68±9.26 years). Two patients (10.52%) did not receive radiological regression and the second procedure was performed. The amount of active substance was adjusted according to mass size with mean quantity 11.57±5.76 mg of bleomycin and mean volume 9.63±3.35 cc of lipiodol. During the follow-ups, laboratory tests and dynamic MR imaging were used and the median follow-up period was 19.50 months (range 4-37 months). While the GLH size was <10 cm in 12 patients (63.20%), the mass size was >10 cm in 7 (36.8%). In 13 patients (68.4%), the effect of pressure on neighboring structures by GLHs was determined by diagnostic imaging. The mass size decreased to 6.65 cm±1.88 cm at the end of the follow-up from a mean of 9.46±2.46 cm, and the mass volume decreased to 108.29±91.19 cc from 333.84±308.84 cc. These changes were statistically significant ($P=0.04$, $P=0.025$, respectively). Decrease in mass size (26.63±13.98%) and decrease in mass size (59.99±2.34%) were found between the pre-treatment and final follow-up and these changes were statistically significant ($P=0.01$, $P=0.04$, respectively). Symptoms of all patients were regressed. No minor or major complications were detected in the control examinations. The technical and clinical success of the procedures was 100%.

Conclusion: Transarterial embolization with bleomycin-lipiodol mixture is an effective and reliable treatment modality for both mass reduction and symptom stress in patients with symptomatic giant liver hemangiomas.

Non-Vascular interventional Radiology

FP - 50

Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 11:30:00

Publication End Date: 2019-04-23 11:37:00

ENDOBILIARY MICROWAVE ABLATION OF THE MALIGNANT BILIARY OBSTRUCTIONS: A PILOT STUDY WITH A NOVEL DEVICE

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Background: To report the initial results of endobiliary Microwave ablation (MWA) in the management of malignant biliary obstructions in English literature.

Purpose: To retrospectively evaluate the efficacy and safety of MWA in the management of malignant biliary obstructions by endobiliary approach.

Material and Methods: Between January 2018-September 2018, 12 patients (male=3, female=9) presented with malignant biliary obstruction was enrolled in the study. All patients undergone biliary drainage first. At first week follow up, patients with decreased serum bilirubin level and biliary decompression were scheduled for treatment with MWA followed by metallic stenting in the same session.

Results: All patients were treated successfully with MWA and stenting. 3 patients had malignant obstruction at hilar level and 9 patients had at distal choledochus. No major complications occurred during the hospitalization period. Mild to moderate abdominal pain was the most frequent minor complication that was treated with analgesic medication only. Mean follow-up was 132.4 days (41-275) and mean primary stent patency was 125.5 days. 2 patients presented with in stent obstruction due to sludge formation during follow-up. They were treated with biliary drainage and still on the follow-up and secondary patency of these stents were 61 and 214 days. 2 patients died due to non-procedure related conditions during follow up.

Conclusion: MWA adapted to biliary system is a novel, safe and promising adjunctive method to metallic stenting in malignant biliary obstructions with high technical success rates and low morbidity-mortality rates.

Non-Vascular interventional Radiology

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 11:37:00

Publication End Date: 2019-04-23 11:44:00

NOVEL USE OF AUTOLOGOUS BLOOD INJECTION IN CT-GUIDED PERCUTANEOUS LUNG BIOPSY: PRELIMINARY RESULTS OF A PROSPECTIVE, SINGLE-CENTER, RANDOMIZED, CONTROLLED CLINICAL TRIAL.

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Purpose: To evaluate the effect of a pre pleural autologous blood injection (PPABI) on the rate of iatrogenic pneumothorax and need to intervention in CT-guided percutaneous lung biopsy.

Material and Methods: The ongoing study was approved by the Ethical Committee of the Ministry of Health. Since October 2018, seventy-six potential study participants referred for percutaneous CT guided lung biopsy assessed for enrollment, but 34 of them were excluded. The study group consisted of 43 patients randomized into PPABI (n =22) versus not using PPABI (n =21) arms. In the PPABI group, 15 ml of autologous blood of the patient was injected into the pre pleural space as a high-pressure sealant before the entrance of the coaxial device into the lung parenchyma. The primary endpoint was defined as the absence of pneumothorax on chest radiographs at all two required postprocedure assessments (2 and 24-hours). A blinded independent interpretation of the Chest X-rays was performed.

Results: Two groups were statistically the same in all characteristics except target-to-pleura distance that in the PPABI group was significantly longer than the control group. Median(min-max) of target-to-pleura distance in PPAB and control groups were 2,6(0-6) and 1(0-5) respectively (p= 0,028). Pneumothorax developed in one patient (4.5%) in the PPABI group and, an intervention was not required. In the control group, pneumothorax developed in 3 patients (14.3%), aspiration was required in two cases (9.5%) without drainage. No complications related to pre pleural autograft blood injection were observed.

Conclusion: Despite limitations in the sample size of this ongoing study, preliminary findings reveal that PPABI reduced the rate of asymptomatic and intervention needed pneumothorax during CT-guided lung biopsy.

Non-Vascular interventional Radiology

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Publication Hall: Meeting Room B

Publication Start Date: 2019-04-23 11:44:00

Publication End Date: 2019-04-23 11:51:00

CAN COMPUTED TOMOGRAPHY REPLACE ULTRASONOGRAPHY DURING PERCUTANEOUS NEPHROSTOMY?

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Purpose: To present the experience with computed tomography (CT)-guided percutaneous nephrostomy (PCN)

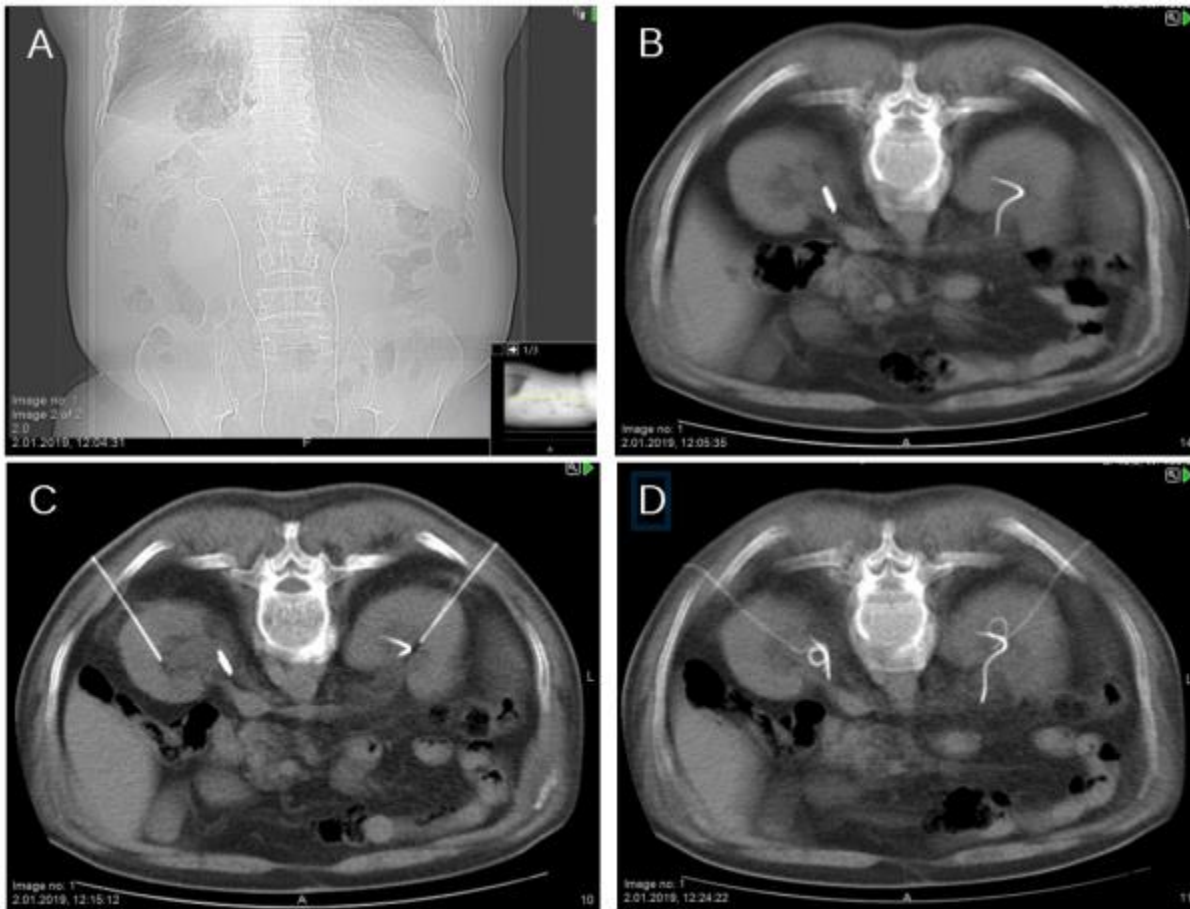
Material and Methods: Seventy-two CT-guided PCN in 56 patients were performed between May 2017-January 2019 by the same radiologist. The most common indication was ureterolithiasis (n=21) and bladder cancer (n = 21). Other indications were cystitis (n = 4); pelvic cancer (n = 2); colon cancer (n = 2); post-iatrogenic ureteral injury (n = 2); cervical cancer (n = 1); endometrial cancer (n = 1); Ureteropelvic Stenosis (n = 1) and rectal cancer (n = 1).

Results: The median of intervention duration was 18 minutes ranging between 7-59 minutes. The radiation exposure dose of the patients during CT-guided PCN was measured to be 3,1-50,1 mGray (median: 7,5 mG). A minimal subcapsular hematoma developed in only one patient (1,8%). The catheter was changed with fluoroscopy guidance in 10 of the cases 3-6 months after the first nephrostomy insertion. The radiation exposure dose during fluoroscopy ranged between 16-142 mGray (median: 32 mGray). There was a significant difference in the radiation exposure dose between the CT and angio groups (p <0.001). The dose in the Angio group was higher than the CT group (Table).

Conclusion: Nowadays, ultra-low-dose and fast-acting CT-guided nephrostomy is a safe, user-friendly procedure which leads patients to less radiation exposure than expected. Also, the presence of obesity, meteorism, scoliosis, and retrorenal colon could be managed better in PCN. In the presented series CT guidance is a better alternative of ultrasonography and fluoroscopy in PCN tube insertion with an acceptable duration of the procedure and low complication rate in patients with different indications and wide age interval.

Figure:

Description of the Figure: Bilateral percutaneous nephrostomy in a patient with urinary bladder cancer and obstructed bilateral double J stent catheter. (A) shows scanogram. (B) Axial CT imaging for entry point detection. (C) 18 G chiba needle inside nondilated renal pelvises. (D)



Tables:

Comparison of the radiation exposure dose between CT Guided PCN and Fluoroscopy Guided Nephrostomy exchange groups

	Median(min-max)	p-value
CT Guided PCN (n=56)	7,5(3,1-50,1)	<0,001
Fluoroscopy Guided Nephrostomy exchange (n=10)	32(16-142)	

Descriptive statistics of demographic and clinical variables

	CT Guided PCN(n=56)	Fluoroscopy Guided Nephrostomy exchange (n=10)
Age (Mean±SD)	61,29±10,40	71,50±7,69
Intervention_duration (Median(min-max))	18(7-59)	-
Gender-male n(%)	33 (58,9)	7 (70,0)
catheter_entrance_pole (Right) n(%)		
Upper	16 (44,4)	-
Middle	9 (25,0)	-
Lower	11 (30,6)	-
catheter_entrance_pole (Left) n(%)		
Upper	19 (52,8)	-
Middle	12 (33,3)	-
Lower	5 (13,9)	-
Hydronephrosis Grade Right n(%)		
1	21 (58,3)	-
2	13 (36,1)	-
3	2 (5,6)	-
Hydronephrosis Grade Left n(%)		
0	1 (2,8)	-
1	20 (55,6)	-
2	9 (25,0)	-
3	6 (16,7)	-
Intervention_side n(%)		
Right	20 (35,7)	3 (30,0)
Left	20 (35,7)	1 (10,0)
Bilateral	16 (28,6)	6 (60,0)
Complication rate n(%)	1 (1,8)	0 (0,0)