

ratio (VRR) by ultrasound examination at 6 months and 12 months post ablation procedure. Therapeutic success was defined as a >50% and 75% volume reduction at 6 months and 1 year, respectively. All minor and major complications were recorded. **Result(s):** The mean volume of nodule was 54.3 cm³ (42.6–291.5). The mean VRRs were 60.4±12.7% at 6 months and 81.4±11.8% at 1 year. Two patients (4%) had immediate voice changes and three patients (6%) had infection with sinus formation. **Conclusion(s):** Radiofrequency ablation is very effective in decreasing the size of the benign thyroid nodule.

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Contrast-Enhanced Ultrasound in Vascular and Interventional Radiology: Current Status and Future Perspective

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Background: Ultrasound (US) is the modality of choice for the workup of many vascular pathologies based on a plethora of advantages. However, US has inherent limitations including limited spatial resolution, and lower sensitivity to slow blood flow and vascular luminal irregularities. For evaluation of vascular pathology, angiography has long been considered the gold standard. Cross-sectional imaging techniques have gradually replaced angiography for the evaluation of many vascular beds, currently being regarded as the diagnostic imaging modality of choice for diagnosis of virtually almost every vascular disease leaving angiography mainly for treatment purposes. The introduction of microbubbles as ultrasonographic contrast agents has rendered contrast-enhanced ultrasound (CEUS) an evolving valuable complementary technique with markedly increased diagnostic accuracy for assessing both the macro- and microvascular anatomy of the vasculature. CEUS has a safety profile which is much favorable when compared to other contrast agents. Due to its superior spatial and temporal resolution, ability for prolonged scanning and dynamic and real-time imaging, it provides clinically significant additional information compared to the standard Duplex US. **Method(s):** In this communication, we discuss the currently available literature regarding vascular applications of CEUS, with special attention to the abdominal aorta, briefly elaborate on CEUS technique and present cases in order to illustrate the added value in the diagnosis and treatment of aortic pathologies. **Result(s):** CEUS enables imaging of adventitial vasa vasorum providing additional clinical utility since adventitial vasa vasorum has important implications in the pathogenesis of vascular diseases. The recent advances of CEUS along with ongoing development of drug-eluting contrast microbubbles has allowed improved targeted detection and real-time ultrasound guided therapy for aortic vasa vasorum inflammation and neovascularization in animal models. **Conclusion(s):** CEUS is uniquely suited to comprehensively assess and potentially treat vascular diseases in the future.

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Inferior Vena Cava Filters: Retrospective Review of a Single Center Experience

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Background: Venous thromboembolism is a preventable culprit of Pulmonary Embolism. PE remains a source of significant mortality and morbidity in Saudi Arabia, its exact incidence remains unknown, however, deaths due to VTE and PE range from 10-12% in inpatients. While most patients are managed by oral anticoagulants; many risk factors preclude their use and recurrent PE remains a major risk. IVC filters has been introduced since 1969, many filter types were developed since then which had better outcomes and less complications. In this review, we explored the indications, success and complications rate of IVC insertion in a large tertiary hospital in Saudi Arabia to compare it to the trends reported in the latest edition of Guidelines in the United States and Europe (CIRSE). **Method(s):** The medical charts of patients who had IVC insertion from 2011-2016 years were reviewed. Indications of insertion, outcomes, complications of IVC were collected. Categorical variables were summarized as proportion and percent. Continuous variables were summarized as mean and standard deviation. Data was analyzed using SAS. **Result(s):** Total of 411 patients were eligible based on the inclusion criteria. 61.07% males, 38.93% females. The main referring departments were Internal Medicine, Orthopedics, and Emergency Room 15.54% (n= 55), 13.84% (n= 49), 12.99% (n=13.84), respectively. Main indication for filter insertion in our sample was calculated based on the latest SIR guidelines. the most common indication of insertions was Absolute or relative contraindication to Oral anti coagulants 131 (37.86%) followed by PE or DVT and transient inability to anticoagulate in 65 (18.79%). 2.94% had history of thrombophilia and one patient (0.24) pregnant at the time of insertion and had thrombosis as a late complication. While 18.79% (n=65) of our patients did not have a clear indication documented to insert IVC filters. Thrombotic events were calculated in our sample and 52.94% (n=216) had only one thrombotic event. An increase of filters insertion was noted from 2011 (n=57) to 2016 (n=89). The institution has all filter types available most of the time, yet, Optease filters were inserted mostly (75.31%) followed by Denali (15.65%). 97.32% (n= 399) of filters were inserted infrarenally, while 2.20% were inserted suprarenally (n=9). In 0.49% (n=2) of our patients, IVC filter was inserted in the common iliac vein. We have lost long follow up due to different reasons in 55.42% (n=225) of our patients which is significant despite the follow up measures taken in our institution. Immediate complications did not occur in 83.90% (n=344). Most common immediate complication was tilting 13.66% (n=56). Mean duration of filter in situ was 91.91 days. No late complications occurred in 40.25% (n=163). Loss of follow up due to death and other causes occurred in 27.90% (n=113) and 21.48%

(n=87), respectively. Most common late complication was Thrombosis 9.38% (n=38). Successful retrieval rates varied between years. IVC thrombus complicated retrieval in 1.97% of patients (n=8) and failure to retrieve due to other comorbidities and implications occurred in 1.48% (n=6). **Conclusion(s):** We have observed IVC Insertion problems similar to international reported figures. The rate of Insertion problems was 5-23% in the US, while it was 16.1% (n=66) in our sample. Filter movement was reported in 0-18% in the US, whereas it was 0.49% in ours (n=2). Retrieval was successful in 84.97% (n=153) of patients who followed up, 50.62%, compared to 34% in the US. IVC filter penetration occurred in 0.49% (n=2) of our patients which significantly lower than the range reported in US (0-41%) which could be due to loss of follow up in our sample. Compared to the International standard considered by our institution, our sample had similar thresholds. In summary, IVC filter placement in our institution had minimal complications and is similar. The rate of mortality was 0.24%.

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A Prospective Randomized Study Comparing the Use of Plain Percutaneous Transluminal Angioplasty Balloon Catheters for Primary Balloon Angioplasty versus Hydrostatic Dilatation to Prepare the Cephalic Vein Prior to Creation of Radio-Cephalic Arteriovenous for Dialysis

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Background: To compare the immediate technical success, maturation time, and the need for further balloon assisted maturation for radio-cephalic arteriovenous fistulas to render them ready for hemodialysis. **Method(s):** Fifty-seven (57) patients with ESRD in need for vascular access for whom a radio-cephalic arteriovenous fistula was of choice, with a cephalic vein ≤ 3 mm. They presented to us from the period of November 2014 till January 2017, were randomized into two groups. The cephalic vein was prepared in group (A) using hydrostatic dilatation prior to creation of the fistula, while in group (B) the vein was prepared using a PTA balloon catheter for primary balloon angioplasty prior to the creation of the fistula. **Result(s):** The technical success rate was 96.5%, 100% in both groups respectively. The reintervention rate was 35.7%, 7.1% in both groups respectively. The mean maturation time was 43 days, 32.1 days in both groups respectively. **Conclusion(s):** Using primary balloon dilatation during creation of a radiocephalic arteriovenous fistula leads to a decreased maturation time and less reintervention rate, but still these results are statistically insignificant may be due to small number of study sample.

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Localized Aortic Primary Stenting for Focal Aortic Stenosis: Review of 9 Patients with Short-Term Outcome

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Background: Focal infra-renal aortic stenosis that demands treatment is relatively infrequent condition. Short stenotic lesions may be amenable for endovascular treatment, while long lesions are traditionally treated with surgical bypass grafting. **Method(s):** Nine consecutive patients were treated for infra-renal aortic stenotic lesions with primary focal aortic stenting between April 2014 and October 2015 in vascular unit, general surgery department, Benha University and vascular surgery department, Nile Insurance Hospital and vascular surgery department, Ain Shams University. Indications included disabling claudication (n=2), blue toe syndrome (n=4) or minor tissue loss (n=3). **Result(s):** This study had technical success 88.9% with clinical and hemodynamic success 100%. 6 months primary patency for focal aortic stents was 100% with complications rate 22.2%. **Conclusion(s):** Focal aortic stenotic lesions could be safely managed by endovascular therapy. Primary stenting is associated with improvement of clinical and hemodynamic outcome.

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Urgent Embolization of Bilateral Middle Rectal Artery in the Management of Life-Threatening Hemorrhoid Bleeding in a Patient with Occlusion of the Inferior Mesenteric Artery

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Background: Internal hemorrhoids rarely cause life-threatening massive rectal bleeding and usually depend on the inflow of the superior rectal arteries. We report a case of an urgent embolization technique by embolizing both middle rectal arteries in a patient presenting with a life-threatening rectal bleeding and an occluded inferior mesenteric artery on CT scan. **Method(s):** The procedure was performed with a right femoral arterial approach. Left internal iliac artery was cannulated with a 5 F long sheath (after cross-over). Angiographies then Cone Beam CT (CBCT) were performed showing a large anastomotic left middle rectal artery involved in the hemorrhoidal vascularization. Superselective catheterization of left middle rectal artery was realized using a 2.8 F microcatheter. Then embolization using a packing of microcoils and some pledget of gelfoam to close the anastomotic shunts was performed.