

only LTP and not the survival. In univariate analysis, COPD comorbidity was the only factor associated with poorer OS, but the association did not reach statistical significance ($P = 0.094$). **Conclusion:** The findings of this study confirm the appropriateness of percutaneous RFA and MWA for lung metastasis treatment, in terms of good tolerability, safety, and efficacy at follow-up.

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Real-World Experience with the Viabahn-Covered Stent in the Cephalic Arch Vein of the Native Arteriovenous Fistula

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Objectives: To investigate the real-world outcomes of the Viabahn-covered stent for the treatment of cephalic arch vein stenosis in arteriovenous fistula. The current therapeutic options for cephalic arch vein stenoses lack durability, leading to frequent re-intervention or loss of the vascular access. **Methods:** Cephalic vein arch angioplasty and placement of the Viabahn-covered stent (Gore, Flagstaff, Arizona, USA) at multiple centers. Patients were followed up at 1, 3, and 6 months to detect fistula dysfunction, to evaluate safety, and to evaluate restenosis rate. **Results:** Ten patients were treated for fistula dysfunction which included high venous pressures, low dialysis blood flows, and prolonged bleeding after de-cannulation. Ten stents were used in total, with a median stent diameter of 10 mm and length of 10 cm. Immediate technical success was 100%. Immediate restoration of normal access function was restored in 100% of patients. During a mean follow-up of 6 months, one patient had died from unrelated causes; all other patients were available for review. Two patients required re-angioplasty of the Viabahn stent postinitial intervention for high venous pressures and low dialysis pump flows, respectively. Two other patients required angioplasty of the fistula but not the covered stent segment postinitial procedure. All other patients were dialyzing effectively. No stent infections were seen during the follow-up period. **Conclusion:** Six-month follow-up demonstrates excellent safety and preservation of dialysis function using the Viabahn-covered stent to treat cephalic arch vein stenosis.

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Long-Term Follow-Up of Giant Symptomatic Hepatic Hemangiomas Treated with Direct Sclerotherapy: Introducing a New Approach

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Objectives: To investigate the feasibility, safety, and efficacy of percutaneous sclerotherapy using intralesional bleomycin injection in reducing the symptoms and volume of the Giant Liver Hemangiomas. **Methods:** This prospective study was

conducted from April 2016 to June 2019. Patients with persistent abdominal pain or discomfort directly caused by hemangioma (confirmed by computed tomographic scan) who refused surgical option were included. Patients with any coagulopathy states (platelet count $<100,000$ or international normalized ratio >1.5) were excluded. All demographic variables and laboratory tests as well as patients' symptoms and complaints during this period were recorded. All procedures were performed in an outpatient setting under local anesthesia. Patients underwent percutaneous intralesional sclerotherapy using bleomycin-lipiodol mixture under fluoroscopic guidance. All early and late complications, if any, were recorded. GLH volume and three-dimensional diameters as well as pain severity (according to visual analog scale [VAS]) were documented before and 36 months after the procedure. **Results:** Five patients (4 [80%] females, mean age: 43.8 years, range 33–51) were recruited for the current survey. Mean GLH volume was 378.60 ± 229.80 cc before the sclerotherapy, which was dropped to 143.20 ± 165.54 cc ($71.3\% \pm 19.9\%$) on the 36-month follow-up ($P < 0.001$). Mean GLH's longest diameter before the procedure was 108.60 ± 18.76 mm, which was declined to 64.60 ± 33.71 mm ($42.6\% \pm 20.5\%$) ($P = 0.035$). Patients' VAS score before the procedure was 8.60 ± 0.89 , which was decreased to 4.40 ± 1.14 on the follow-up ($P = 0.002$). Liver function tests revealed no abnormalities before the procedure, 1 day after the treatment, and on the 36-month follow-up. No allergic reaction was observed. One of our patients had self-limiting intraperitoneal hemorrhage which led to a 3-day hospital stay and then was discharged with stable condition. No other early or late complication was detected. **Conclusion:** Percutaneous sclerotherapy is a relatively safe and effective method in GLH treatment. Further investigations in larger samples and in comparison with control group (in clinical trial setting) are required to confirm the current findings.

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Our Attempt for Diabetic Foot Management With Infrapopliteal Artery Angiosome Revascularization

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Objectives: 15%–25% of DM patients develop diabetic foot. **Methods:** Diabetic patients Wifi 3–4 with CLTI ($n = 35$): Men 25 (71.4%), women 10 (28.6%); average age – 68 years, selected with adequate inflow to the popliteal artery, as defined by presence of one of the following:

- Palpable ipsilateral popliteal artery pulse
- Biphasic or triphasic Doppler waveform in the ipsilateral popliteal artery
- Normal radiographic appearance of ipsilateral common femoral and arteria profunda femoris or all detected lesions are $<50\%$ severity stenosis.

Results: In Group I (angiosomal revascularization) of 16 patients in 2 (12.5%) repeated interventions were performed. Of these, 1 (6.25%) eventually had a high amputation. In Group II (nondirect

angiosome revascularization) of 16 patients in 5 (31.25%) repeated interventions were performed. Of these, 4 (25%) eventually had a high amputation and 1 (20%) had healing of trophic disorders. In Group III (nonangiosomal revascularization), out of 3 patients, in 1 (33%) twice there were repeated interventions, finally high amputation was performed, in 1 (33%)-healing of trophic disorders within 2 months, in 1 (33%)-trophic disorders did not heal (after 2 months after surgery the death for other reasons). **Conclusion:** The angiosomal concept does not provide an exact answer regarding the role of each of the main arteries in the blood supply to the shin and limb. If it is impossible to follow to the angiosomal principle, we should try to restore blood flow to any trunk artery.

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Saudi Women's Awareness of Uterine Artery Embolization as a Treatment Option for Fibroids

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Objectives: In the current study, Saudi women's knowledge of uterine artery embolization (UAE) as a treatment option for fibroids was investigated. **Methods:** In this cross-sectional study conducted in 2019, an anonymous online questionnaire was sent to women living in Hail and Riyadh via social media. The questionnaire contained 11 multiple-choice questions and was divided into two parts. The first part contained questions about demographic characteristics and one question about whether or not the respondent had a history of fibroids. The second part contained items pertaining to awareness about treatment options for fibroids and whether the respondent had heard of UAE or not. The data were analyzed using SPSS version 22 software. **Results:** Of 845 questionnaires received back, 9.2% were from respondents who reported having a history of fibroids. Overall, 76.1% of the respondents had never heard of UAE. Awareness of treatment options for fibroids was significantly associated with level of education and involvement in a medical field ($P < 0.05$, Chi-square test). Of the respondents who had a history of fibroids, 71.7% had never heard of UAE and 8.9% had heard about it from an obstetrician or gynecologist. Only 6.4% were aware of all the treatment options for fibroids, and 28.2% thought that hysterectomy was the only treatment option. **Conclusion:** The current study highlights the need for a public awareness program about the treatment options for fibroids and greater effort on the part of treating doctors to offer UAE to appropriate candidates.

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Percutaneous Management of the Thrombosed Dialysis Access Using Arrow-Trerotola Thrombectomy Device: A Single-Center Experience

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Objectives: To access thrombosis that frequently occurs in patients with end-stage renal disease (ESRD) on hemodialysis, which requires declotting by various techniques and devices. We review the performance of Arrow-Trerotola™ percutaneous thrombolytic device (PTD) for declotting arteriovenous fistulas and grafts (AVFs and AVGs) at King Faisal Specialist Hospital and Research Center, Jeddah, Saudi Arabia. **Methods:** We retrospectively evaluated a total of 38 patients – 19 males (50%) and 19 females (50%) with a median age of 63 years. Twenty-six patients (68%) had an AVF, while 12 patients had an AVG (32%) (18% radiocephalic, 63% brachiocephalic, 16% brachioaxillary, 2% femoral). All patients were treated with mechanical thrombectomy using Arrow-Trerotola device. Technical and clinical success rates as well as primary, primary-assisted, and secondary patency rates were assessed at 3, 6, and 12 months. **Results:** In our group with a thrombosed AVF or AVG, all were treated using the Arrow-Trerotola device and adjunctive administration of 6 mg of alteplase. Balloon angioplasty and/or stenting were done for the associated stenosis. Our technical success rate was 89%, while the clinical success rate was 79%. The primary patency over 3, 6, and 12 months was 74%, 63%, and 42%, respectively. While the primary-assisted patency was 84%, 79%, and 71%, the secondary patency rates were 84%, 79%, and 74%, respectively. **Conclusion:** Our experience supports the international published data of the efficacy and safety of Arrow-Trerotola thrombolytic device in the management of thrombosed hemodialysis accesses.

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Emergency Endovascular Exclusion of False Lumen Rupture after Frozen Elephant Trunk Procedure in Type A Aortic Dissection: A Case Report

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Objectives: Thoracoabdominal aortic false lumen rupture is a challenging and catastrophic problem after aortic arch surgery with 100% mortality if untreated and high mortality with open surgery. The objectives were to describe endovascular emergency approaches for occlusion of false lumen rupture after hybrid arch replacement. **Methods:** First Case: An 82-year-old female patient underwent repair for type A aortic dissection (TAAD) with E-VITA open plus hybrid stent graft™ (JOTEC GmbH, Hechingen, Germany), followed with TEVAR, distal landing zone 5 cm above the celiac trunk with persistent retrograde reperfusion of the false lumen. She presented 4 months later with sudden onset of chest and hypotensive requiring resuscitation. Computed tomography angiography (CTA) revealed a complicated false lumen rupture with left-sided hemothorax and aortic true lumen compression. We performed an endovascular bottle neck occlusion with implantation of four Amplatzer-Occluder Vascular Plugs II (AGA)™ and TEVAR distalization of the true lumen directly above the level of the celiac trunk. Second Case: A 58-year-old male patient underwent aorta ascendens replacement in 2004 in TAAD followed by redo