bypass surgery in 2013 and frozen elephant trunk E-VITA™ hybrid grafting in 2019. On the 3rd postoperative day, CTA showed a false lumen rupture and a true lumen collapse. As emergent case the patient underwent an extended true lumen TEVAR to the celiac trunk. Inflow occlusion into the false lumen was achieved with Candy Plug implantation (Bolton/ Vascutek CMD 44 mm  $\times$  100 mm  $\times$  44 mm) and Amplatzer-Occluder Vascular Plugs II (AGA)<sup>™</sup> (22 mm × 18 mm), 1 cm proximal to the celiac trunk. Results: The procedure times were 168 and 235 min, respectively. The mean fluoroscopy times were 24/46 min, respectively. The amounts of contrast dye used were 250 and 276 ml, respectively. The technical success rate was 100% and no intraprocedural complications occurred. Both patients showed complete thrombosis of the treated ruptured false lumen in the postoperative CTA. The postoperative course was uneventful without stroke, paraplegia, myocardial infarction, or renal failure. After a follow-up of 3 months, both patients are alive and well. Conclusion: Emergency endovascular false lumen occlusion is an important technique in the armamentarium of specialized centers for aortic endovascular therapy to control bleeding and initiate false lumen thrombosis in the management of ruptured aortic dissection. Further cases (multicenter study) and follow-up are needed to consolidate these early results.

#### **P510**

## Management of Hepatic Encephalopathy Associated with Porto-Systemic Shunts: Hemodynamic Changes by Interventional Radiology Procedures

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Objectives: To describe various techniques for reduction/ occlusion of the blood flow in gastro-renal/leino renal shunts for controlling the arterial ammonia level causing hepatic encephalopathy and suggesting the best technique according to individual patient needs. Methods: In 11 patients, different technique of blood flow reduction in the shunt was used according to the size, shape, position, and origin of the shunt. Of 11 patients, eight underwent for shunt obliteration, two underwent for splenic artery embolization, and one underwent for leino renal shunt reduction. For leino renal shunt reduction, a stent (preformed hour-glass shape) was deployed in shunt and multiple coils of varying sizes were deployed in the space between stent and shunt wall. For obliteration of shunts, catheter was positioned deep inside the varix, and after inflating, the balloon sclerosing agent in the form of foam was infused with the goal of filling the full extent of varices. For reduction of flow in shunt, polyvinyl alcohol particles were infused in lower pole branches of spleen. It causes decrease blood in the splenic vein. Results: 7/8 shunt obliteration, 1/1 shunt reduction, and 2/2 partial splenic artery embolization showed significant reduction in arterial ammonia level. Conclusion: Ammonia level can be controlled by controlling blood flow through the shunts. Various interventional methods are available and have to select according to the size, shape, and position of shunt.

#### **P511**

### Unusual Hematologic Indication of Splenic Artery Embolization: Clinical Indications and Technical Tips

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Educational Poster Background: The uncommon hematological indications include paroxysmal nocturnal hemoglobinuria, myelofibrosis, myelodysplasia syndrome, leukemia, and chemotherapy-induced splenomegaly. Preprocedural Preparation: Initially, a patient should be vaccinated against encapsulated organism 2 weeks before embolization, and preprocedural antibiotic should be given 1 h before the procedure. Procedural Details: Partial or distal splenic artery embolization started by celiac angiogram to define the vascular anatomy and give specific attention to the origin of the splenic artery and intrasplenic segmental branches. Then, a microcatheter advanced distally to splenic hilum targeting the inferior branches. The aim of embolization is to embolize at least one-third of the spleen and maximum of half of it. A Polyvinyl Alcohol 300-500 µ is a favorable embolic material to be used. Postprocedural Care: Prophylaxis AB and NSAID are used routinely for 1 week. Partial splenic artery embolization is a safe and short time procedure that aiming to increase platelet count.

#### **P512**

## Slow-Flow Vascular Malformations of Extremities: Case Series

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Educational Poster Background: Venous malformations (VMs) are a type of vascular malformation that results from veins that have developed abnormally, which stretch or enlarge over time. VMs can be extremely painful and sensitive. Sclerotherapy has evolved as the best treatment option for VMs with good prognosis. Low-flow vascular malformations, especially VMs and macrocystic lymphatic malformations, are effectively treated by percutaneous intralesional injection of sclerosant drugs, such as ethanol, and detergent sclerosant drugs. Good-to-excellent results are possible in 75%-90% of patients who undergo serial sclerotherapy. Most adverse effects are manageable, but severe complications can result from the intravascular administration of ethanol. It is generally recommended that the treatment of vascular malformations be performed in a multidisciplinary setting by practitioners with appropriate training and support.

#### **P513**

# Strategies for the Endovascular Management of Visceral Artery Aneurysm and Pseudoaneurysm

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Educational Poster Background: Visceral artery aneurysm (VAA) and visceral artery pseudoaneurysm (VAPA) rupture can lead to catastrophic hemorrhage with high mortality. Diagnosis is with computed tomographic angiogram. Management is endovascular and aims to exclude the aneurysm from the circulation. We describe the treatment of three patients (mean age 74) with asymptomatic and ruptured VAA/VAPA presenting to a University Teaching Hospital. Patient A -30 mm gastroepiploic aneurysm: Angiogram confirmed a tortuous GA arising from the gastroduodenal artery (GDA). This aneurysm was excluded from the circulation by placement of embolization coils in front and back door arteries with angiographic success maintained during 2 years' imaging follow-up. Patient B - Ruptured 11 mm SMA branch pseudoaneurysm: DSA confirmed SMA branch pseudoaneurysm, tight coeliac axis (CA) stenosis, and right hepatic artery replacement to the GDA. The pseudoaneurysmal SMA branch also perfused the CA territory retrogradely via the GDA. Arterial inflow to the pseudoaneurysm was a tiny vessel with a high angle to the SMA branch. Covered stentgraft placement in the pseudoaneurysm neck was used to exclude it from the circulation while maintaining retrograde perfusion of the CA via the SMA. Patient C - 9 mm ruptured GDA branch aneurysm: DSA demonstrated CA occlusion and a pseudoaneurysm with a narrow neck supplied by a tortuous submillimeter GDA branch. CA occlusion and tortuosity prevented stent-graft placement. Embolization of the pseudoaneurysm feeding vessel would have compromised retrograde CA perfusion. The pseudoaneurysm neck was cannulated with 0.021" microcatheter and 0.014" wire and embolized using Histacryl glue and lipiodol (2:1 ratio). Angiogram showed exclusion of the pseudoaneurysm and maintained retrograde (via GDA) CA perfusion. Conclusion: In this educational poster, we show how our optimal treatment of these three patients presenting to our institution was determined by the clinical scenario and locoregional arterial anatomy.

#### **P514**

### Imaging Pathway for the Diagnosis and Treatment for Pelvic Congestion Syndrome

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Educational Poster Background: Pelvic congestion syndrome (PCS) is a known (and underdiagnosed) cause of chronic pelvic pain in the female population. There is an increased incident in the postpartum cohort and in patients with recurrent lower limb varicose veins. Although the pathophysiology is poorly understood, pelvic venous incompetence is defined by the presence of pelvic varicoceles and reflux within the ovarian veins. The clinical presentation is often nonspecific; thus, the causes of pelvic pain such as pelvic inflammatory disease, endometriosis, adenomyosis, and uterine fibroids must be excluded before diagnosis. We describe the clinical aspects of PCS including the common presentations, examination findings, and etiology. Our imaging pathway for patients clinically suspected of PCS includes transabdominal/transvaginal ultrasound, duplex ultrasound,

and magnetic resonance imaging pelvis features (with specific examples). The treatment options will be considered, with a specific focus on ovarian vein embolization (OVE). The technical considerations of OVE and the pearls and pitfalls with example cases from our tertiary center are also demonstrated. PCS can be a debilitating condition in the symptomatic patient population. The importance of correct diagnosis and treatment with OVE with a multidisciplinary approach can lead to good clinical outcomes in the vast majority of cases.

- 1. To demonstrate clinical presentation and imaging findings of pelvic congestion syndrome (PCS).
- 2. To demonstrate our local imaging pathways for patients with PCS.
- 3. To understand the treatment options available for PCS and specifically the work up for ovarian vein embolization, focusing on pearls and pitfalls.

#### **P515**

## Selective Uterine Artery Embolization in Postpartum Hemorrhage; Updates on 5 Years' Single-Center Experience

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Objectives: Postpartum uterine hemorrhage is one of the most important causes of maternal mortality worldwide and as well in Egypt. Causes are variable, the most important of which are uterine atony and birth canal lacerations. Uterine artery embolization (UAE) is very effective if local measures failed to stop bleeding. Methods: In the period between January 2015 and December 2019, 200 women (mean age 26 years) with postpartum hemorrhage underwent embolization in Ain Shams University Hospitals after failure to achieve hemostasis after conservative treatments. Clinical success was defined as stabilization of vital data of the patient and obviation of hysterectomy. Gel foam hand-cut pledges were the embolic agents used. Results: Bleeder whether extravasation or pseudoaneurysm could be identified angiographically in 120 patients. In 80 patients, no definite bleeder or just diffuse hyperema could be identified, so bilateral UAE was done empirically. Clinical success rate was 85% (170 patients including 117 patients with angiographically identified bleeder). Hysterectomy was needed in 30 patients after rebleeding post-UAE. No major procedural-related complications were recorded. Conclusion: Transcatheter arterial embolization of the uterine artery is a feasible treatment option in management of postpartum bleeding with low rates of complications. Angiographic identification of the bleeding source was associated with higher clinical success rates decreasing the need for hysterectomies.