

**Background:** Spontaneous rupture of hepatocellular carcinoma (HCC) is relatively rare emergency condition carrying high rates of mortality. Patients usually present with hemodynamic instability and hemoperitoneum. Rate of post management success depends on various conditions most important of which is the patient's hemodynamic status upon presentation, proper diagnosis, liver function, and future liver remnant. The aim of our study was to assess the short term outcome bleeding arrest by angioembolization for cases with rupture HCC. **Methods:** From December 2014 till December 2016, five ruptured HCC cases diagnosed clinically and radiologically were referred to Ain Shams University Hospitals IR unit for emergency angioembolization. Full lab studies and imaging were taken. Hand cut Gel foam was the embolic agent used. **Results:** Technical success defined as catheterization of the HCC feeding vessel with cessation of tumoral blush on control angiogram was achieved in 100% of cases 3 cases were HCC from the left lobe and 2 from the right lobe. Clinical success defined as cessation of bleeding denoted by rise of HgB concentration on blood transfusion and achieving hemodynamic stability was achieved in 100% of cases within the first 3 days. 1 case died one week after the procedure from massive oesophageal varices bleeding. Another died during hospital admission from hepatic decompanation status affecting renal functions. 3 patients ar still under their regular follow up. **Conclusions:** Emergency transarterial angioembolization for ruptured HCC carries high technical and clinical success rates aiming at hemodynamic stability and bleeding cessation.

## P506

### Testicular Infarction, a Complication of Preoperative Renal Embolization with Embospheres and Gelfoam: A Case Report

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**Background:** Renal artery embolization (RAE) has a wide range of indications including preoperative embolization of renal cell carcinomas and treatment of benign renal tumors for potential hemorrhagic complications. RAE is considered generally safe and effective, however it is not without potentially serious complications. We present a case of right testicular infarction following right renal embolization for a renal cancer using Embospheres and Gelfoam. **Case Report:** A 59-year-old male with large right renal cell carcinoma invading the renal vein, underwent preoperative right renal artery embolization using embospheres and gelfoam to decrease intraoperative hemorrhage and the need for post-operative transfusion. During the procedure a small uretral artery was seen arising from the distal right renal artery. Following the procedure the patient underwent right nephrectomy with minimal bleeding intraoperatively and estimated blood loss of less than 200 ml. On postoperative day 2, the patient developed right testicular pain and swelling. Physical examination showed mild right scrotal swelling and skin edema. Scrotal ultrasound showed heterogenous right testicle with decreased vascularity and absent arterial waveforms, although some venous waveforms were demonstrated. Small to moderate right hydrocele with debris. The patient was managed conservatively, with progressive improvement. On follow-up the patient reported

resolution of the symptoms and scrotal ultrasound showed interval improvement in the right testicle vascularity with demonstration of both venous and arterial waveforms. **Conclusions:** Small renal arterial branches and connections are potential route for non-target embolization during renal artery embolization, leading to potentially serious complications including testicular infarction.

## P507

### Endovascular Embolization of Brain Arterio-Venous Malformations Using Extended Onyx Injection Technique

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**Background:** To report our experience in the treatment of brain arteriovenous malformations using extended Onyx injection technique (ev3, Irvine, Calif). **Methods:** From November 2010 to Agust 2014, 22 patients with brain arteriovenous malformations were treated endovascularly. They were 9 men and 13 women with a mean age of 32 years. A total of 34 endovascular procedures were performed with Onyx as the sole embolic agent. **Results:** The course of endovascular treatment was completed in 18 patients. In 8 patients, an angiographic cure was achieved using embolization as the sole therapeutic technique. 6 patients underwent radiosurgical treatment after nidal size reduction <2 cm was accomplished by endovascular treatment. 4 cases underwent surgery after embolization. Further endovascular treatment was planned in 4 patients, Procedure-related transient neurologic deficits were observed in 1 patient, experienced mild transient hemiparesis resolved soon after treatment. There were no procedure related permanent morbidity or deaths. **Conclusions:** Onyx allows obtaining higher rates of anatomic cures compared with those obtained previously with other embolic agents in the treatment of brain arteriovenous malformations.

## P508

### Percutaneous Direct Intrahepatic Porto Systemic Shunt in Chronic Budd Chiari: Techniques and Report of Four Cases

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**Background:** To describe the techniques of percutaneous direct intrahepatic porto systemic shunt (DIPS) in chronic Budd Chiari syndrome and report the technical and clinical success in four patients. **Methods:** Between Aug 2015 and Dec 2016, four patients (2 males) with mean age of 40.7 years (23-65 years) presented with chronic Budd Chiari due to hypercoagulable state (n = 3). Patients presented with progressive liver failure (Child-Pugh score B7-B9) and refractory ascites (n = 4) with grade 3 esophageal varices (n = 1), medically treated hepatic encephalopathy. Patients had mean BCS-TIPSS score of 4.4 (3.3-6.2) with complete chronic occlusion of hepatic veins (n = 4) and IVC occlusion (n = 1). Two patients failed

previous attempts of hepatic vein recanalization and IVC stenting, retrospectively. All patients underwent ultrasound and fluoroscopy guided percutaneous direct intrahepatic porto systemic shunt creation extending from the right portal vein to IVC. One patient had IVC recanalization along with shunt creation. **Results:** All procedures were technically successful with no procedure related complications. One patient required shunt revision 3 days later with portal stent extension due to shunt thrombosis. All shunts remain patent at mean follow up time of 205 days with resolution of ascites in 3 patients. One patient had decreased frequency of drainage due to associated nephrotic syndrome and hypo albuminemia. All patients required life-long anticoagulation with warfarin. **Conclusions:** Percutaneous direct intrahepatic porto systemic shunt creation in chronic Budd Chiari is technically feasible and safe with good short term outcomes.

## P509

### Microwave Ablation of Hepatocellular Carcinoma Using a New Percutaneous Device and Results of Combination Therapy: Preliminary Results

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**Background:** Thermal ablative techniques have gained increasing popularity as safe and effective options for patients with unresectable solid malignancies. Microwave ablation has emerged as a relatively new technique with the promise of larger and faster ablation areas without some of the limitations of radiofrequency thermal ablation. **Methods:** Under ultrasound and CT guidance 30 HCCs in 22 patients were treated through a percutaneous approach. The median diameter of lesions was 2.3 cm (range = 2.0-8.0 cm); 14 lesions had a diameter greater than 30 mm. We used a microwave generator (ECO for Microwave Ablation) connected to a 14- or 16-gauge coaxial antenna. Contrast-enhanced computed tomography scan was carried out one month after treatment, and then every three months to assess efficacy. **Results:** Complete ablation was achieved in 84.3% of the lesions after a mean of 1.03 percutaneous sessions. For small HCCs (diameter <3 cm) complete necrosis was obtained in 100%. Local tumor progressions were found in 3 treated lesions (15.1%) a median of 10.5 months after ablation. Minor complications occurred in 5.1% procedures. No deaths, or other major complications occurred. **Conclusions:** In our experience, the new device for microwave ablation proved to provide an effective and safe percutaneous ablative method, capable of producing large areas of necrosis. Combination therapy with microwave ablation followed by TACE is very good tool for large sized tumours.

## P510

### Laser Sheath Assisted Removal of Optease Filters with Long Dwelling Time

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**Background:** To evaluate the feasibility and safety of laser sheath assisted removal of IVC filters with long dwelling times. **Methods:** Between December 2015 and December 2016, three patients underwent laser sheath assisted filter removal. All patients had prophylactic filter placement following trauma and prior to orthopedic surgery. Filters were infra renal Optease with mean dwelling time was 510 days (210-720 days). All patients had failed previous retrieval attempts using standard techniques, and were prescribed prophylactic anticoagulation therapy. Glidelight laser sheath was used (12 or 14 Fr) to disengage the filter from the IVC wall. The sheath was operated at 60 mJoule/mm with pulse repetition rate between 60-80 Hz. Two filters were removed via femoral access and one was removed from jugular access as the hook was embedded in the occluded right iliac vein. **Results:** Laser sheath assisted filter removal was technically successful in all patients. The mean fluoroscopy time was 55 minutes (4-118 minutes) and the mean total DAP was 101410 mGyCm<sup>2</sup>. Two patients had IVC stenosis following retrieval and responded adequately to balloon dilatation. No major complications were encountered. Patients were prescribed prophylactic enoxaparin for 10 days post procedure. Abdominal CT scan at 1 month was done in two patients, showed patent IVC with no stenosis or thrombosis. All patients discontinued the pre-procedure anticoagulation therapy. **Conclusions:** Laser sheath assisted filter removal of Optease filters with long dwelling time is feasible. Safety of this technique is yet to be proven in a larger patient cohort.

## P511

### Peritoneal Decompression Devices: Introduction to IR Nurses

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This educational poster introduces peritoneal decompression devices to IR nurses and briefly discusses how to maintain them in patients with malignant ascites. Malignant ascites (MA) is the cancer-associated accumulation of fluids in the peritoneal cavity. The most gastrointestinal tract tumors that are frequently associated with MA include pancreatobiliary, gastric, esophageal and colorectal cancers. MA associates with significant morbidity and poor prognosis with median overall survival of 1-6 months. Symptomatic MA is a significant clinical challenge due to considerable reduction in the quality of life (QoL) with no generally accepted guidelines for the management of MA. The main goal of the peritoneal decompression is to palliate the symptoms of elevated intra-abdominal pressure (discomfort, dyspnea, nausea, and vomiting) and improve QoL. Paracentesis is indicated for symptomatic ascites which can be relieved by draining up to 5 L of fluid. Peritoneal decompression devices (PDDs) help in maximizing time spent out of hospital. They include external drainage catheter devices and peritoneovenous shunts. These devices are placed under strict aseptic techniques, imaging guidance and sometimes-moderate sedation on outpatient or one-day surgery basis at the interventional radiology suites. However, to date, none of these different devices has been subjected to evidence-based clinical trials.