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EP13

PULMONARY ARTERY ANEURYSM – TO GLUE OR TO COIL?

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Introduction:
Haemoptysis is a striking and alarming symptom which has an extensive array of aetiologies. Further evaluation is often warranted to look for life-threatening conditions in the event of severe haemoptysis. Pulmonary artery aneurysm is one such rare aetiology in which urgent intervention is required. Here, we describe a case of pulmonary artery aneurysm secondary to a lung abscess, and our corresponding endovascular treatment approach and its challenges.

Case Report:
Our patient is a previously well 31-year-old gentleman who presented with a 5-day history of productive cough and pyrexia, as well as onset of frequent moderate haemoptysis since day 4 of illness. These symptoms were associated with exertional dyspnoea and right sided pleuritic chest pain. Computed tomography (CT) angiogram of the thorax revealed a pulmonary artery aneurysm within a lung abscess cavity in the right lower lobe. Initial approach to embolise the aneurysm via non-targeted coil deployment was unsuccessful due to technical challenges in reaching the desired location. Subsequent attempt via glue embolization was successful, albeit complicated with moderate glue dispersion into branches of the posterior segmental right lower lobe artery. Immediately post-procedure, the patient reported minimal residual haemoptysis with complete resolution in 2 days. A repeated CT angiogram later shows a residual aneurysm with partial enhancement, and decision was made for conservative management and allow for spontaneous thrombosis of the aneurysm sac.

Conclusion:
Our case highlights the respective advantages and disadvantages of endovascular coiling and glue embolization in the management of pulmonary artery aneurysm, especially in terms of technical difficulties and procedural complications.

EP14

ENDOVASCULAR MANAGEMENT OF A MURAL TYPE OF VEIN OF GALEN MALFORMATION IN A 5 YEAR OLD, FILIPINO CHILD WITH DEVELOPMENTAL DELAY AND SEIZURES: A CASE REPORT

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Introduction:
Vein of Galen malformations (VGOMs) are rare congenital vascular malformation in the pediatric population, accounting for less than 1% of all intracranial vascular malformations. The primary pathology of a VGOM is a high flow arteriovenous fistula with direct choroidal artery drainage into the median prosencephalic vein, which is the precursor of the vein of Galen. There are only few cases reported in literature of VGOMs in early childhood with developmental delay and seizures. This study aims to present a case of a mural type of VGOM, along with its clinical presentation, diagnosis and endovascular management.

Case Report:
A 5 year old, Filipino female, presented with developmental delay and seizures. Cranial MRI showed a Vein of Galen malformation with a dilated median prosencephalic vein. 6-vessel conventional angiogram with digital subtraction angiography confirmed a mural type of VGOM supplied by posterior choroidal arteries on both sides. Staged transarterial embolization of the feeding vessels of the VGOM using coils and Onyx glue were done which resulted in partial occlusion, marked slowing of flow and reduction in the diameter of the dilated median vein. Patient had no complications post-operatively with resolution of seizures.

Conclusion:
Before the advent of endovascular therapy, the prognosis of Vein of Galen malformations was very poor with 100% mortality for patients who did not undergo treatment and 90% mortality following surgical intervention. Given the complexity of managing this disease, endovascular management combined with a multidisciplinary approach is strongly recommended for it can significantly lower mortality and can result in improved neurologic outcomes in these patients.

EP15

PERCUTANEOUS COIL EMBOLISATION OF HEPATIC ARTERY MYCOTIC ANEURYSM

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Introduction:
Mycotic hepatic artery aneurysm is a rare but recognized complication of bacterial endocarditis. Therapeutic options include open surgery, endovascular embolization/ stent placement, medical therapy, or a combination of these. Although transarterial endovascular embolization has been described in the literature as the mainstay of treatment, percutaneous embolization can be an effective alternative. We hereby report a unique case of a patient with Methicillin-susceptible Staphylococcal Aureus (MSSA) bacterial endocarditis acutely presented with mycotic hepatic aneurysm and biliary obstruction.

Case Report:
A 43-year-old immunocompromised gentleman with recurrent infective MSSA bacterial endocarditis presented with jaundice, tachypnoea and lower limb oedema. Blood profile was deranged with low haemoglobin, normal white cell count, hyperbilirubinemia and elevated liver enzymes. Multiphasic CT liver revealed right hepatic artery pseudoaneurysm, measuring 1.5x1.7x1.8cm (AP x W x CC) causing intrahepatic duct obstruction. Multiple failed attempts to cannulate coeliac trunk during transarterial hepatic artery embolization. Subsequently, patient underwent percutaneous transhepatic biliary drainage to create a window for percutaneous transhepatic coiling embolization. A total of 14 fibered coils were deployed into the aneurysm via a 21-gauge Chiba needle under direct ultrasound guidance, confirmed with transarterial angiogram. The procedure was well tolerated with no immediate complications or recurrence of pseudoaneurysm during follow up.

Conclusion:
Early diagnosis and aggressive treatment is the key to determine successful outcome. Treatment needs to be individualized and can be technically difficult owing to preexisting patient comorbidities, associated complications and compliance issues. In this case, we demonstrated an alternative and effective method in treating mycotic hepatic pseudoaneurysms.

EP16

HEPATIC FALCIFORM ARTERY AS AN ANATOMICAL VARIANT AND ITS CLINICAL SIGNIFICANCE IN CHEMOEMBOLISATION

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Introduction:
The authors present a case that accentuates the anatomy of the hepatic falciform artery with a prevalence of 2% and it is the second most common non-hepatic artery which arises from the hepatic vasculature. The hepatic falciform artery is an anatomical variant which has arterial communication between the liver and the anterior abdominal wall. It commonly arises from the middle hepatic artery (56%) and runs an extrahepatic course in the falciform ligament and provides blood supply to the periumbilical region.

Case Report:
A 47 year old Malay gentleman with underlying Diabetes Mellitus and Hepatitis B was first diagnosed with Hepatocellular Carcinoma upon screening for hepatitis. Initial CT scan showed liver cirrhosis with portal hypertension and a suspicious liver lesion. MRI then confirmed the findings of a segment IVa liver lesion suggestive of hepatocellular carcinoma. This gentleman was subsequently scheduled for transcatheter arterial chemoembolisation (TACE) to the segment IVa liver lesion.
During treatment, the hepatic falciform artery was identified on angiography as it arises from the middle hepatic artery. The middle hepatic artery arises from the right hepatic artery and gives off the segment IV hepatic artery. CT scan of the hepatic artery further confirmed this finding. The segment IV hepatic artery was superselectively cannulated and infused with Lipiodol instead of chemotherapy agent due risk of non-targeted chemoembolisation to the anterior abdominal wall and umbilicus. A total of 5 mls of Lipiodol was infused with good tumour uptake. No abdominal wall injury occurred post procedure.

Conclusion:
Upon identification of the hepatic falciform artery, it can be prophylactically embolised prior to transcatheter arterial chemoembolisation to reduce the risk of supraumbilical rash and necrosis. Thus, it is vital to identify the presence of this artery prior to embolisation or surgery to this region.

EP17

PERCUTANEOUS TRANSHEPATICCHOLECYSTIC PLACEMENT OF UNCOVERED STENT IN THE COMMON BILE DUCT AND PERCUTANEOUS CHOLECYSTOMY TUBE INSERTION

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Abstract:
We report the case of 53 years old female patient with pancreatic neoplasm causing obstructive jaundice. The patient's general condition did not permit for endoscopic approach and obstruction that not associated with intrahepatic duct dilatation, prohibited hepatic puncture. Therefore, the transhepaticcholecystic approach was used for placement of 10m x 60mm (Taewoong) Self Expandable Fully Uncovered Stent in the distal common bile duct. No post-procedural complication. Patient was referred to the oncology team for neoadjuvant chemotherapy in view of locally advanced neoplasm and planned for operation by hepatobiliary team later. Transhepaticcholecystic approach is an alternative approach route for biliary intervention when transhepatic approach is not feasible, even in cases where placement of uncovered stent is considered necessary.

EP18

CRYOABLATION AS AN EFFECTIVE TREATMENT FOR LUNG METASTASES SECONDARY TO UNDIFFERENTIATED SOFT TISSUE SARCOMA

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Introduction:
Pulmonary metastectomies have been the standard of care for oligometastatic lung disease but many patients are not surgical candidates due to disease burden, lesion location, or overall patient condition. Image-guided thermal ablation including cryoablation has proven to be a valid treatment alternative. Cryobalation generates sub-zero temperatures forming an ice ball to cover the tumor and safety margin at − 40° C. Cytotoxic cell destruction is achieved at temperatures below − 20° C.

Case Report:
60-year-old man presented with right thigh tumour, which was diagnosed as undifferentiated sarcoma. Multiple resections of tumours at right thigh and right inguinal region were done due to recurrence. After five years, patient was found to have five new lung nodules; one at upper lobe and four at lower lobe. Patient underwent a pulmonary metastatectomy and a video-assisted throracoscopic surgery (VATS) for the lower lobe nodules over the span of two years. The multidisciplinary team decided for cryoablation of the two remaining nodules to be done on two separate sessions. Nodules were 2.6cm and 3.0cm at lower and upper lobe, respectively. Two cryoprobes and triple-freeze ablation protocol were used for each nodule. PET-CT post-procedure showed no uptake. Latest CT at 18 months post-cryoablation for lower lobe nodule and 6 months for upper lobe nodule showed progressive reduction in size of the treated areas. Patient remained disease free until 2 years after the first cryoablation where he developed brain metastases.

Conclusion:
Advantages of cryoablation include repeatability, sparing of normal lung parenchyma and the ability to visualize the ablation zone in near real time. Most common complication is pneumothorax requiring chest tube placement. Post-ablation scars are variable in appearance on CT, but successful ablation results in stable or decreasing size of the post-ablation scar over time.

EP19

SUPER-SELECTIVE TRANSARTERIAL GLUE EMBOLIZATION (TAGE) OF ACQUIRED UTERINE ARTERIOVENOUS MALFORMATIONS (AVMS) - A CASE REPORT

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Introduction:
Uterine arteriovenous malformations (AVMs) are abnormal communications between uterine arteries and uterine veins, which can be congenital or acquired. Congenital uterine AVMs are extremely rare whereas acquired uterine AVMs are relatively common. Acquired uterine AVMs are commonly associated with uterine trauma/ surgery (dilatation and curettage post miscarriage, caesarean section or other pelvic surgeries), infection, gynaecological malignancies, gestational trophoblastic disease (GTD) and exposure to diethylstilboestrol. Recent advances have demonstrated that transarterial embolization is the preferred treatment for uterine arteriovenous malformations as compared to hysterectomy with the advantages of being minimally invasive and the potential to preserve fertility.

Case Report:
A 41 years old lady, post evacuation of retained product of conception (ERPOC) for septic miscarriage, presented with excessive vaginal bleeding that required multiple blood transfusions. MRI and MR angiography of the pelvis showed left sided uterine hematoma with enlarged serpentine vessels arising from the left uterine artery, suggestive of left uterine AVM. Patient underwent left uterine artery embolization. Pre-embolization angiogram confirmed the diagnosis of left uterine AVM with demonstrable arterial feeder from the left uterine artery and drainage via bilateral uterine veins. The arterial feeder of left uterine AVM was super-selectively cannulated and embolized with diluted glue (N-butyl-cyanoacrylate) mixture. Immediate complete obliteration of AVM was achieved with preservation of non-feeder branches of left uterine artery, resulting in significant reduction of vaginal bleeding.

Conclusion:
Uterine AVM is a rare complication of ERPOC or other pelvic surgeries which may cause massive or life-threatening bleeding. Early recognition is crucial and it necessitates a high level of suspicion. Super-selective trans-arterial glue embolization (TAGE) is a fast and cost-effective treatment option for uterine AVM with the advantage of preserving fertility of patient.