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BLUNT INTRAORAL TRAUMA LEADING TO DELAYED ISCHEMIC STROKE IN A CHILD: A RARE CASE OF TRAUMATIC CAROTID DISSECTION AND VENOUS THROMBOSIS

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Introduction: Blunt cerebrovascular injury (BCVI) is a rare but critical cause of ischemic stroke in children, often underrecognized due to subtle presentations and delayed symptom onset. Traumatic internal carotid artery dissection (ICAD) from intraoral injury is exceedingly uncommon, especially in previously healthy children.

Case Report: A previously healthy 4-year-old boy sustained a low-impact intraoral injury after colliding with a metal structure in a supermarket. He developed headache the following morning and subsequently exhibited acute left lower limb weakness. Non-contrast CT brain revealed an acute infarct in the right middle cerebral artery (MCA) territory, with a dense MCA sign and an air locule extending from the oropharynx to the distal cervical internal carotid artery. MRI with diffusion and FLAIR sequences confirmed the infarct, and MRA demonstrated absent flow in the right ICA, consistent with dissection. CT angiography further identified a long-segment right ICA occlusion with concurrent thrombosis of the right internal jugular vein. The patient was managed conservatively with antithrombotic therapy and close neurological monitoring.

Discussion: This case illustrates an unusual mechanism of pediatric ischemic stroke: blunt intraoral trauma causing ICAD and thromboembolic MCA infarction. In children, the extracranial ICA is anatomically predisposed to trauma-induced dissection due to its mobility and lack of surrounding bony protection. Radiological features such as the dense MCA sign, FHVS, flow voids, and air locules in the carotid sheath are key diagnostic clues. Timely recognition is imperative, as early antithrombotic therapy can prevent secondary embolic events. Treatment remains controversial in pediatric populations, with no clear consensus on anticoagulation versus antiplatelet use.

Conclusion: This case underscores the necessity of maintaining high clinical suspicion for BCVI in children with neurological deficits following oropharyngeal trauma. Early imaging, particularly with CTA and MRA, plays a pivotal role in diagnosis. Multidisciplinary management and further research are required to guide therapeutic decision-making in pediatric ICAD.

FLUOROSCOPIC GUIDED JUGULAR CATHETER INSERTION FOR HEMODIALYSIS: COMPARISON OF OCCUPATIONAL DOSE BY ACCESS SITE AND POSITION DURING PROCEDURE

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Introduction: Exposure to radiation during fluoroscopically guided procedures poses radiation health risk not only to patients but to medical staff. Furthermore, stochastic effect such as oncogenesis has long latent period. Fluoroscopic guided jugular catheter insertion is perceived to be of high radiation dose to the operator due to proximity with image intensifier. This study sought to analyse the occupational radiation dose during catheter insertion for haemodialysis with variations in access side (right or left internal jugular vein) and position of medical personnel during the procedure.

Method: Thymoma Occupational dose (µSv) measurement of the operator, 1st assistant and 2nd assistant as well as the table panning radiographer using RaySafe i3 Real-time Dose Monitoring System worn outside of the lead gown at chest level was done for 10 adult patients who undergone jugular catheter insertion in the month of December 2024. Patient dose parameters of dose area product (DAP) (Gy.cm2) and air kerma (AK) (Gy) were also measured.

Results: There was no significant difference between right or left sided approach in dose received by operator 1 (p=0.629). Dose to first and second assistants were near background radiation. If the radiographer is positioned less than 50 cm from the tube without shielding, the dose is markly higher compared to other positions. Series with more than 6 exposures per series produces significantly higher dose to the operator (p=0.010). A single exposure run with exposure DAP less than 4 mGy.cm2 produces low radiation dose to the operator (<7 µSv) which is near to background radiation.

Conclusion: Awareness of potential radiation risks and factors that increase the dose to medical personnel is essential towards mitigating strategies for better radiation safety at work. Radiation dose to personnel in the angiographic suite is near background radiation with proper distancing, shielding and exposure duration.

CASE REPORT : PARENT ARTERY OCCLUSION FOR LEFT SUPRACLINOID ICA PSEUDOANEURYSM

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Internal carotid artery (ICA) pseudoaneurysms are rare but potentially life-threatening often requiring parent artery occlusion (PAO) when reconstructive options are not feasible. This case report describes an 18-year-old patient with a traumatic left supraclinoid ICA pseudoaneurysm. Under angiographic guidance, vascular access was obtained. Vessel navigation was achieved with a 0.035" glidewire and 4Fr Vert catheter while distal access was facilitated using a 6Fr Navien catheter, an SL-10 microcatheter and a Traxcess 14 microguidewire. Embolization was performed with three ev3 Axium Prime coils—one 2 mm x 8 cm coil placed distal and two 3 mm x 8 cm coils placed proximal to the pseudoaneurysm for complete isolation. Post-procedural digital subtraction angiography (DSA) confirmed total occlusion of the pseudoaneurysm, with preserved perfusion to the left anterior and middle cerebral arteries through cross-flow from the right ICA. No procedural complications were observed. This case highlights PAO with targeted coil embolization as a safe and effective treatment for ICA pseudoaneurysms when adequate collateral circulation is present, emphasizing the importance of pre-procedural planning and cross-flow assessment.

SEALING THE ESCAPE: HEPATIC VEIN BALLOON OCCLUSION ENABLING SAFE TACE IN AV SHUNTING HEPATOCELLULAR CARCINOMA

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Hepatocellular carcinoma (HCC) is a leading cause of cancer-related mortality globally. Transarterial chemoembolization (TACE) is a standard treatment for unresectable HCC; however, arteriovenous (AV) shunting complicates treatment by increasing hepatopulmonary shunt fractions, limiting options like radioembolization, and heightening pulmonary risks. Temporary balloon occlusion of the hepatic veins presents an innovative approach to reduce AV shunting during embolization. We report a case of large HCC (>10 cm) in a 63-year-old male with Child-Pugh A, predominantly involving segment VIII. Patient was not eligible for selective internal radiation therapy (SIRT) due to significant AV shunting identified during pre-treatment angiography, thus planned for conventional TACE. He subsequently underwent TACE via a left distal transradial approach. During hepatic angiography, large AV shunting into the left hepatic vein was noted. The shunt was too large and distal to be occluded by gelfoam or coils. Selective catheterization and chemoembolization of the tumor-feeding artery with intermittent temporary balloon occlusion of the left hepatic vein was performed. Chemoembolisation with 10mls lipiodol-5mls Doxorubicin mixture sandwiched with 9 mls alcohol-lipiodol (33%) mixture was used. Post-procedure cone-beam CT showed partial lipiodol uptake within tumour without lipiodol deposition in the lungs. There was no difficulty in breathing or chest pain in the 3 days post procedure to suggest lipiodol pneumonitis. Patient was discharged without complications. Patient was recommended immunotherapy to decrease the tumor size and AV shunting. Eligibility for SIRT or TACE would be assessed 3 months after immunotherapy, considering the presence of AV shunting. This case highlights the feasibility and safety of hepatic vein balloon occlusion during TACE in patients with HCC and AV shunting, where standard embolization techniques may pose significant risks.

ENDOVASCULAR APPROACH TO ACUTE HIGH FLOW GASTRIC VARICEAL BLEED SECONDARY TO HEPATOCELLULAR CARCINOMA ASSOCIATED ARTERIOPORTAL SHUNTS

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Cerebrospinal fluid Arterioportal (A-P) shunts are frequently observed in patients with advanced Hepatocellular carcinoma (HCC) particularly the one associated with tumoral thrombus. In a patient with existing portal hypertension and a well-developed gastric varix, this combination can be lethal as the arterialization of hepatic venous pressure gradient can lead to torrential uncontrollable variceal bleed. Here we report a case 50-year-old gentleman who presented with acute upper gastrointestinal bleeding (UGIB). Multiple endoscopic treatments done to temporary secure the bleeding. Subsequently Computed Tomography (CT) revealed presence of HCC, AP shunt and tumoral thrombus within the main portal veins with dilated gastric varices. Complex endovascular treatment was performed via trans-arterial embolization of AP shunt followed by transhepatic balloon occluded retrograde transvenous occlusion (BRTO) of gastric varices to control the bleeding. This case demonstrates the challenges in understanding the complex physiology and alteration of flow dynamic followed by the treatment options available that can be offered to help to control and prevent torrential bleeding.

EMBOLISATION OF BLEEDING GASTROESOPHAGEAL JUNCTION TUMOR

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Gastrointestinal tumour rarely presented with upper and lower gastrointestinal bleed. It is difficult to manage endoscopically due to its high recurrence rates. It causes dilemma in management of patient with gastrointestinal bleed. Embolization of the tumour has a crucial importance to prevent the gastrointestinal bleed, and its vital role are rarely reported. Presented to us a 65 year old gentleman known case of oesophageal adenocarcinoma diagnosed a year ago and refused operation and defaulted follow up was presented with hematemesis and melenic stool. Computed tomography (CT) thorax, abdomen pelvis and CT angiography was done which shows tumour at gastroesophageal junction with no active bleeding. In ward, patient was treated conservative but still passing melenic stool and blood haemoglobin is still dropping despite transfusion, hence he was referred for embolization. We proceeded with angiogram which revealed tumoral blush surrounding the gastroesophageal tumour from the left gastric artery. Embolization was done to the left gastric artery using polyvinyl alcohol (PVA). Post embolization, there was no bleeding and haemoglobin was static. Patient underwent 1st chemotherapy and subsequently succumbed due to neutropenic sepsis.

LIFE SAVING ENDOVASCULAR COIL TRAPPING EMBOLIZATION FOR AN INTRACRANIAL MYCOTIC ANEURYSM

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Intracranial mycotic aneurysms are rare but life-threatening complications of infective endocarditis (IE), typically resulting from septic emboli causing vessel wall destruction and aneurysm formation. We report a case of a 43-year-old woman with prior MSSA IE in 2019 who presented with headache, fever and altered behavior. Blood cultures grew Borderline oxacillin-resistant Staphylococcus aureus (BORSA). Echocardiography revealed mitral and aortic valve IE. Initial CT brain noted intracranial bleeds. MRI brain suggested meningoencephalitis with possible septic emboli, but MR angiography showed no aneurysm. Digital subtraction angiography revealed a fusiform aneurysm at the P3 segment of the left posterior cerebral artery, suggestive of a ruptured mycotic aneurysm. Due to the distal location and small calibre of the artery, endovascular coil trapping with parent artery occlusion was chosen, as other options such as flow diverter were not feasible. A total of six coils were used to completely occlude the aneurysm and the parent vessel. The patient made a full recovery with a Modified Rankin Scale (mRS) score of 0. Early diagnosis is key, especially in ruptured aneurysms where endovascular treatment is usually preferred. In some cases, particularly with small and distal arteries, parent artery occlusion may be necessary when the benefits outweigh the risks.

TRANSARTERIAL INDOCYANINE GREEN LOCALIZATION PRIOR TO VIDEO ASSISTED THORACOSCOPIC SURGERY: A SINGLE CENTER EXPERIENCE

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Introduction: Video assisted thoracoscopic surgery (VATS) is now a minimally invasive technique for diagnostic and curative resections of small low grade lung tumors. Combined with fluorescence imaging using indocyanine green (ICG), this method has revolutionized VATS and enhances the safety and detection rates of tumors, and improves margin clearance. We describe our technique and initial experience in our center of using ICG prior to VATS.

Method: Technical aspects related to positioning and approach were discussed with a multidisciplinary team prior to procedure. Procedure was performed under general anesthesia just prior to surgery. Pre procedure imaging used to analyze and calculate trajectory as well as determine length of needle. Under CT guidance, a 22G spinal needle was used to skewer the lesion.
Total of 0.2ml to 0.4 ml of ICG was injected into the lesion. Post injection, spinal needle stylet was reintroduced prior to removal. Post procedure scan then performed to ensure no moving of needle. After the injection, patient was sent to operation theater for VATS. Intra-operative imaging enables direct visualization of site of tumor and adequate resection done.

Results: Total of 11 patients of ICG localization performed from September 2022- April 2025. Of these cases, 8 were right lung lesions and 3 were left lung lesions. 7 patients were performed supine and 3 patients were performed prone. Spillage of indocyanine green noted in 2 patients. All lesions showed adequate resection margins with no tumor at the periphery.

Conclusion: CT guided ICG localization prior to VATS is a safe and effective method to ensure good operative success of tumor resection for low grade lung tumors.