Advances in Vascular Intervention

13:15 Convention Hall A

Advances in Multidisciplinary Management of Vascular Anomalies: Radiologist's Perspective

Funa DHS

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Department of Radiology and Imaging, Queen Elizabeth Hospital, Hong Kong

Vascular anomalies are congenital diseases of blood and lymphatic vessels and are classified into vascular tumours and vascular malformations by the ISSVA classification. Vascular anomalies affect patients of all ages. Patients are stigmatised socially due to their disfiguring appearances, and suffer from pain and functional loss. In severe cases, detrimental symptoms and morbidity can occur, and profuse bleeding can sometimes be life-threatening.

Advances in diagnostic radiological technology improve the accuracy of diagnosis and facilitate decision making in treatment. The use of portable ultrasound machine at the Joint Vascular Anomalies Clinic allows instant diagnosis at one-stop consultation with various specialties. Magnetic resonance imaging and angiography, which are non-invasive and radiation-free, allow better lesion characterisation and accurate blood flow assessment.

Advances in interventional radiology by image-guided sclerotherapy and embolisation result in optimal symptom control and size reduction in the treatment of low-flow and high-flow vascular malformations. State-of-the-art imaging guidance by ultrasound and digital subtraction angiography allows radiologists to accurately access the culprit vessel, where we can inject sclerosant to shrink and occlude the diseased blood vessels without damaging adjacent normal structures. Various sclerosants are now available, including dehydrated alcohol, sodium tetradecyl sulphate, doxycycline, and bleomycin. Detachable metallic coils and permanent liquid embolic agents such as NBCA glue are adjuncts for safe and effective embolisation, particularly in the treatment of huge arterio-venous fistula. For difficult cases with tortuous diseased vessels, they can be accessed by micro-catheters and micro-guidewires for interventional procedures.

Endo-Vascular Operating Room (EVOR) refers to the setting of biplane digital subtraction angiography machine in the operation theatre. This is a breakthrough in engineering and technology which provides a unique platform to combined surgical and interventional radiological operations.