

OTHER NEUROSURGERY

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Unusual case of Aspergillosis presenting as a skull base lesion*V Pai (Toronto)* L Alshafai (Toronto)*

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Background: Fungi are ubiquitous microorganisms. Sinonasal fungal infections range from an acute fulminant to a chronic indolent clinical course. Fungal infections are common in immunocompromised patients, diabetics, and those with hematological malignancies. We present an unusual case of chronic invasive fungal sinusitis presenting as an anterior skull base lesion. Methods: A 42-year-old patient was referred with a history of right-sided proptosis. Prompt CT and MR imaging revealed a large right sinonasal erosive mass, predominantly T2 hypointense with heterogeneous enhancement. It extended into the right anterior skull base and invaded the right frontal lobe. The mass also invaded into the right extra-conal orbital fat, right pterygopalatine fossa, and right sphenopalatine foramen. Results: In view of the imaging findings, a biopsy was performed which confirmed fungal elements and chronic inflammation. Subsequently, a right-sided endoscopic endonasal resection of the sinonasal mass with resection of the right orbital component and debulking of the anterior skull base component was performed. Culture specimen grew aspergillosis. Conclusions: Extra-sinus invasion in fungal sinusitis is not uncommon. These cases may mimic other pathologies, e.g., tumors, with potential delay in treatment. Sound knowledge of the imaging appearances of this entity is imperative to ensure a good outcome.

SPINE AND PERIPHERAL NERVE SURGERY

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Early and late exercise intervention after lumbar microdiscectomy reduces low back pain, fear avoidance, and improve neurodynamic mobility*L LeBlanc (Ottawa) ID Moldovan (Ottawa) R Ochoa-Sanchez (Ottawa) E Sabri (Ottawa) P Phan (Ottawa) C Agbi (Ottawa) S Mohammed (Ottawa) F AlKherayf (Ottawa)**

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Background: Exercise is commonly recommended to patients following a lumbar microdiscectomy although controversy remains as to the timing and protocols for exercise intervention (early vs late intervention). Our study aimed to evaluate low back pain level, fear avoidance, neurodynamic mobility, and function after early versus later exercise intervention following a unilateral lumbar microdiscectomy. Methods: Forty patients who underwent unilateral lumbar microdiscectomy were randomly allocated to early (Group-1) or later (Group-2) exercise intervention group. The low back pain and fear avoidance were evaluated using Oswestry Low Back Pain Disability Questionnaire, Numeric Pain Rating Scale, and Fear-Avoidance Beliefs Questionnaire. The

neurodynamic mobility and function were recorded with Dualer Pro IQ Inclinometer, 50-foot walk test, and Patient-Specific Functional Scale. Measurements were performed before surgery and post-surgery (1-2, 4-6, and 8-10 weeks) after exercise intervention. Results: Both groups showed a significant decrease in low back pain levels and fear avoidance as well as a significant improvement in neurodynamic mobility and function at 4 and 8 weeks post-surgery. No significant difference was detected between the two groups. Conclusions: These findings showed that early exercise intervention after lumbar microdiscectomy is safe and may reduce the low back pain, decrease fear avoidance, and improve neurodynamic mobility and function.

NEURORADIOLOGY (CSNR)

NEUROIMAGING

P.088

Computed tomography angiography for diagnosis of brain death; a technical review*A Aziz Rizk (Ottawa)* JJ Shankar (Winnipeg)*

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Background: Brain death is defined as an irreversible cessation of all brain activity. Ancillary tests are an objective way to support an initial diagnosis of brain death. Computed tomography angiography (CTA) is an imaging modality utilized as an ancillary mean to assist clinicians with such diagnosis. Different criteria and scoring systems have been proposed, however clear criteria are yet to be recognized to demonstrate full brain circulatory arrest. We aim to discuss different scoring systems presented in the literature and make evidence-based recommendations. Methods: A literature search using titles and key terms was conducted for articles containing brain death ancillary testing diagnosis, and CTA as primary focus. Results: CTA has the benefits of being non-invasive, fast, readily and widely available and it is especially useful in unstable patients. It is essential, however, to confirm intravascular injection of contrast injection by checking opacification of External Carotid Artery branches on CTA to prevent false diagnoses. Conclusions: When faced with the challenging decision to declare brain death in a patient, radiologists often face great apprehension and concern for the large responsibility bestowed upon them. It is critical for radiologist to understand that the final diagnosis of brain death is based on clinical criteria.

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A literature search using titles and key terms was conducted for articles containing brain death ancillary testing diagnosis, and CTP as primary focus*A Aziz Rizk (Ottawa)* N Farhani (Winnipeg) JJ Shankar (Winnipeg)*

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Background: Ancillary testing assist in the diagnosis of brain death. While traditionally, lack of blood flow (BF) in the