Pregnancy-associated meningioma

Pregnancy-associated meningiomas have unique considerations and features regarding their pathophysiology, location, genetic profile, and neurosurgical management. These tumours have been reported to undergo rapid growth during gestation and regression post-partum, implicating the role of female sex hormones in tumour physiology. In addition, these tumours occur at a higher incidence in the skull base compared to sporadic meningiomas in the general population, often impinging on neurovascular structures and requiring emergent resection. While the genomics of sporadic meningiomas has been described, there are no reports characterizing the genetic features of those associated with pregnancy.

Leclair et al. described a patient diagnosed with a diaphragma sellae meningioma early in the third trimester after presenting with rapidly deteriorating vision. At 32 weeks gestation, the baby was delivered by caesarean section and the tumour was removed. Genomic profiling of the tumour sample revealed variants of unknown significance (VUS) in six genes, none of which were in canonical meningioma drivers. They described the surgical approach and discuss the relevant pathology and genomics, as well as medical and surgical management considerations of meningiomas in pregnancy [1)]

1)

Leclair NK, Lambert WA, Wu Q, Wolansky L, Becker K, Li L, Leishangthem L, Bulsara KR. Genomic sequencing of a pregnancy associated symptomatic meningioma of the diaphragma sellae: a case report. Br J Neurosurg. 2022 Jan 8:1-5. doi: 10.1080/02688697.2021.2024503. Epub ahead of print. PMID: 35001774.