

ABSTRACT

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Therapeutic strategies and challenges in the management of craniospinal tumours in pregnancy: a 10-year retrospective tertiary centre study, systematic review, and proposal of treatment algorithms.

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OBJECTIVES: The study aims to review therapeutic strategies in the management of craniospinal tumours in pregnant patients and the factors that may influence the management along with their influence on maternal & foetal outcomes.

MATERIALS AND METHODS: A retrospective single-centre cohort study was performed at a tertiary neurosurgical referral centre. Pregnant patients referred to neuro-oncology multidisciplinary meeting (MDM) with craniospinal tumour were included. Ten-year patient data were collected from hospital records and neuro-oncology MDM outcomes. A systematic review was performed on the available literature as per PRISMA guidelines.

RESULTS: Twenty-five patients were identified with a mean age of 31 years. 88%(n=22) had cranial lesions and 12%(n=3) had spinal lesions. Most of the patients had WHO Grade I/II tumours. 44% underwent surgery when pregnant whilst in 40% this was deferred until after the due date. 16% patients did not require surgical intervention and were followed up with serial imaging in the MDM. Left Lateral/park bench position was the preferred position for the spinal and posterior fossa lesions. Systematic review and retrospective data lead to proposal of treatment algorithms addressing the therapeutic strategy for management of cranio-spinal tumours during pregnancy. Factors that may influence maternal and foetal outcomes during management of these tumours were identified including aggressiveness of the tumour and stage of pregnancy.

CONCLUSIONS: Craniospinal tumours presenting in pregnancy are challenging. The surgical management needs to be tailored individually and as part of a multidisciplinary team approach. Factors influencing maternal and foetal outcomes are to be considered during management and patient counselling.

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