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Diagnosis of medulloblastoma in pregnant women: to continue with the pregnancy or not? A case report and literature review

Feras Sendy ¹, Marta Arrighi ², Quentin Berton ², Shadey Mourinet ², Melina Screnci ², Denis Gallot ¹, Guillaume Coll ³

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Abstract

Background: Medulloblastoma (MB) is an uncommon and challenging diagnosis in pregnant women, and especially in pregnancy after in-vitro fertilization (IVF). Clinical features are easily misinterpreted and mistaken for other more common gestation-related pathologies. We report the case of a 34-year-old patient with clinical symptoms of intracranial hypertension. MB was diagnosed and operated on during the pregnancy.

Objective: To conduct a systematic literature review of other cases of MB operated on during pregnancy, and discuss the clinical and surgical management of MB in pregnancy.

Method: We conducted a systematic literature review according to PRISMA guidelines.

Results: In addition to the present case, 9 cases of MB were reported as operated on during viable pregnancy. In one case, medical abortion was decided on before surgical debulking. Pregnancy term was between 8 and 30 weeks. The most common symptoms were headache, nausea and vomiting followed by dizziness. Tumor prognosis after treatment was favorable in 6 cases out of 10 and unfavorable in 4, with 3 cases of recurrence and 3 of death.

Conclusion: We report the first case of long-term survival after MB in a woman pregnant via IVF. In standard-risk MB, it is possible to carry the pregnancy to term. Vaginal delivery is not contraindicated a priori. Early diagnosis, close clinical and radiological surveillance and surgery are the key factors for better prognosis. Multidisciplinary collaboration is crucial to determine the best timing and treatment.

Keywords: Medulloblastoma; brain tumor; chemoradiotherapy; in-vitro fertilization; pregnancy.

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