

Guidance for the management of obstetric patients with Cerebrospinal fluid (CSF) shunts in situ

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Introduction

- Cerebrospinal fluid shunts are common within the UK and thanks to advances in medical care we are now seeing more pregnant patients with shunts presenting for anaesthetic intervention.
- At present we have little evidence as to how we should best manage these patients and potential complications arising from shunt malfunction.
- Through our own personal experience of a young mother with a blocked CSF shunt in situ we decided to draft guidelines to help future care of these patients.

Description

- The process in setting up an agreed pathway for this patient group needed an expansive MDT approach.
- We initially sought evidence of best practice and drafted a proposed guideline in agreement with local anaesthetic and obstetric departments.
- Our guideline was then presented to the regional neurosurgical department and was modified according to their expert opinion
- This was then presented to the NIOAN committee who made further adjustments before arriving at a final guideline.
- A national charity SHINE has decided to help us with the promotion of these guidelines

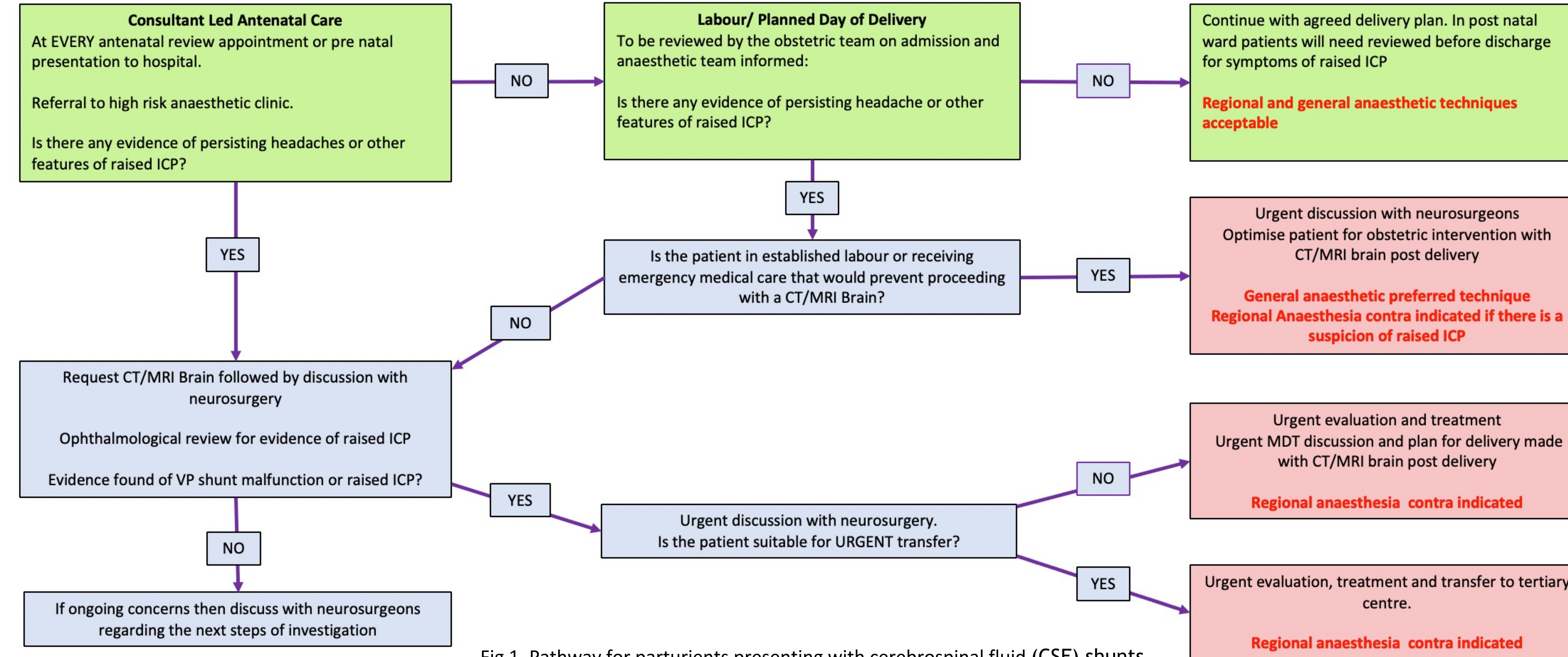


Fig 1. Pathway for parturients presenting with cerebrospinal fluid (CSF) shunts.

Discussion

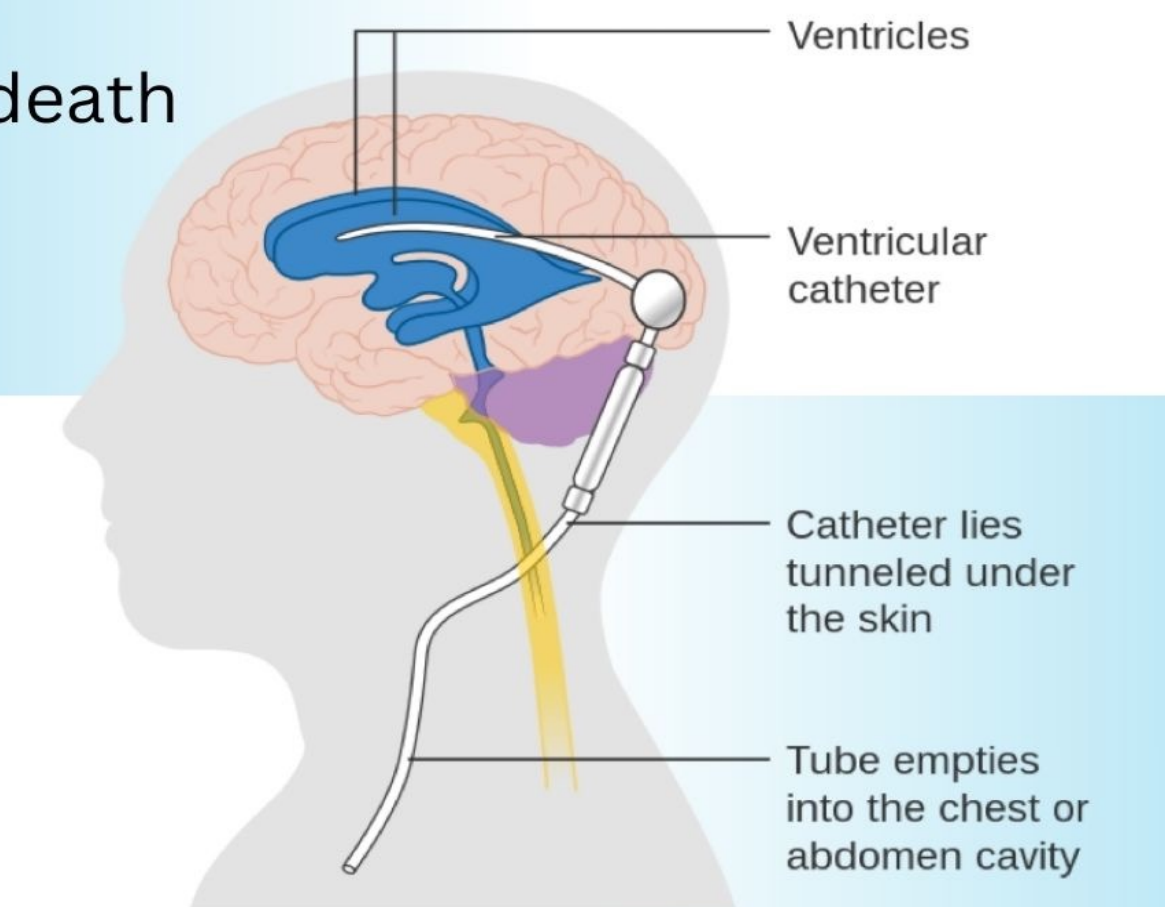
- Adults with pre-existing shunts are complex and are further complicated by pregnancy due to increased CSF production and intra-abdominal pressure. As a result, shunt malfunction occurs commonly during pregnancy (up to 50%) [1,2]
- Any patient identified as having a VP shunt, regardless of the date of insertion should have for consultant led antenatal care at should be referred to the high risk anaesthetic clinic at booking.
- Evidence of raised intracranial pressure must be sought at every review bearing in mind that some symptoms of early shunt malfunction may be subtle and vary between patients.
- Never assume a shunt is non-functional even if it appears broken or has not been revised for a prolonged period – remember that the risk of shunt malfunction increases throughout pregnancy.
- Discussion with the neurosurgical team is important to help the obstetric team determine the most appropriate timing and mode of delivery.

Blocked CSF Shunt

Signs + Symptoms

Acute

- Severe headache
- Vomiting or excessive nausea
- Diplopia (6th nerve palsy)
- Photophobia
- Papilloedema
- Seizures
- Sudden death



Chronic

- Gait disturbance
- Cognitive decline
- General malaise
- Behaviour change
- Subtle visual changes

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Acknowledgements

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References

- Al-Saadi et al. Safety of pregnancy in Ventriculoperitoneal Shunt Dependent Women: Meta-analysis and systematic review. Neurology India 2020 (68) 548-554
- Rajagopalan S et al. Anesthetic considerations for labor and delivery in women with cerebrospinal fluid shunts. IJOA 2017; 30: 23-29