

Management Strategies for the Treatment of Idiopathic Intracranial Hypertension in Pregnancy

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Introduction

The management of patients with Idiopathic Intracranial Hypertension (IIH) includes neuro-ophthalmologic evaluations, weight management, medications, optic nerve sheath fenestrations, venous sinus stentings, temporal decompressions, and CSF diversions. 90% of patients are women of childbearing age. Pregnancy poses certain dietary, medical, surgical and radiological limitations for management. We present a case series of IIH patients successfully managed through their pregnancy, and the various management techniques utilized.

Learning Objective(s)

To describe the options for management of pregnant patients with idiopathic intracranial hypertension.

Methods

IIH patients who required neurosurgical evaluation, CSF analysis or CSF diversion interventions during pregnancy from 2014 through 2015 were reviewed. The methods of management are described.

Results

N=15 patients identified N=7 had shunts in place prior to pregnancy N=4 were diagnosed during their

pregnancy and needed urgent shunts N=4 were managed medically

All patients had successful deliveries and stable to improved visual outcomes.

Diagnosed Prior to Pregnancy

N = 7 had shunts in place during their pregnancy

N = 5 lumbo-peritoneal shunts (LPS)

N = 1 required revision during pregnancy

N = 2 ventriculo-peritoneal shunt (VPS)

N = 1 required serial ultrasound guided LP (USGLP) with VPS revision postpartum

Diagnosed During Pregnancy

N = 4 were diagnosed during pregnancy that required shunt placement due to rapid visual loss despite LP and medical management

N = 1 LPS

N = 3 VPS

Medical Management

N = 4 managed by USGLP alone

N = 3 with known IIH

N = 1 diagnosed during pregnancy

Ultrasound Guided LP



Hand-held probe gives continuous image feedback

Conclusions

The management of IIH in pregnancy requires frequent neuro-ophthalmologic evaluation and individual assessment of patient needs, depending on the severity of visual threat and understanding the limitations of medical, surgical, and dietary management. Most patients with shunts will not need interventions during their pregnancies.



Ultrasound Image of LS Spine



Posterior vertebral bodies are labeled. '+' is at interlaminar space

Conclusions

Surgery may be performed successfully and safely in those with significant visual threat. LP shunting was used sucessfully in the first trimester. VP shunting was used in later trimesters, with US guided assessment of the internal jugular system, limited use of radiography, and radiographic shielding of the uterus. Revisions to shunt systems may be done in the lateral position if needed. Local anesthesia may be considered in selected cases. The Ultrasound Guided Lumbar Puncture (USGLP) is a successful adjunct for diagnosis and intermittent CSF diversion in these patients where fluoroscopy is contraindicated.

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