# Regression of Symptomatic Pituitary Engorgement From Intracranial Hypotension After Epidural Blood Patch


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## INTRODUCTION

Intracranial hypotension is an increasingly diagnosed and recognized condition

Most commonly resulting in postural headaches, neck stiffness, nausea, dizziness, and blurry vision.

The causes are divided into two categories: spontaneous and iatrogenic.

- Spontaneous causes include cerebrospinal fluid-venous fistulas and post-traumatic
- Iatrogenic causes are usually post lumbar puncture or after cerebrospinal fluid leak in spine surgery.

Magnetic resonance imaging findings for intracranial hypotension include pachymeningeal enhancement, drooping of the splenium of the corpus callosum, pituitary engorgement, and in severe cases subdural hygromas/hematomas.

## CASE PRESENTATION

39-year-old female presenting with positional headaches, blurry vision, and left Vith nerve palsy 7 days post-partum.

Uncomplicated vaginal delivery at an outside hospital with an epidural anesthesia catheter, no concern for cerebrospinal fluid leak during procedure

Post procedure day 7 experienced unremitting postural headaches, diplopia and blurry vision on left lateral gaze.

Noncontrast MRI was obtained at the outside hospital and was interpreted as pituitary apoplexy with possible underlying pituitary macroadenoma. Transferred to our institution for possible intervention

Pituitary MRI study with and without contrast showed diffuse pituitary engorgement and pachymeningeal enhancement concerning for intracranial hypotension (Figure 1).

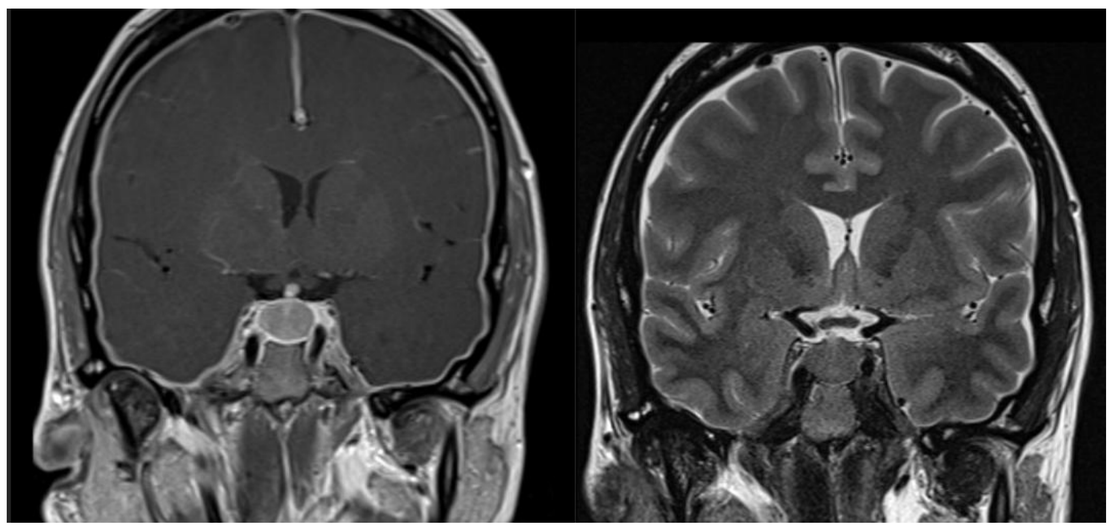
MRI lumbar spine showed fluid collection spanning L1-L4 as well as STIR changes in the interspinous space at L3-4 (Figure 2) consistent with post-procedure cerebrospinal fluid leak from epidural catheter placement.

Underwent epidural blood patch with significant improvement of headaches and diplopia. She had persistent but improving blurry vision and was discharged home on post procedure day 1.

Three weeks after discharge, she had a repeat MRI of the brain and pituitary which showed significant regression of the pituitary gland and decrease in pachymeningeal enhancement (Figure 3).

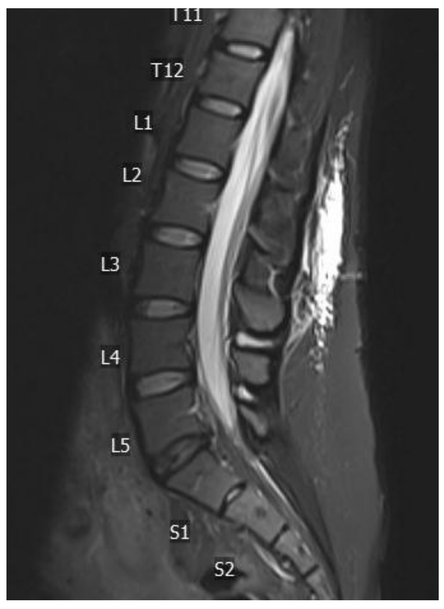
There was no evidence of a pituitary macroadenoma on repeat imaging. Clinically, she had full resolution of her postural headaches, double vision, and diplopia.

## FIGURE 1



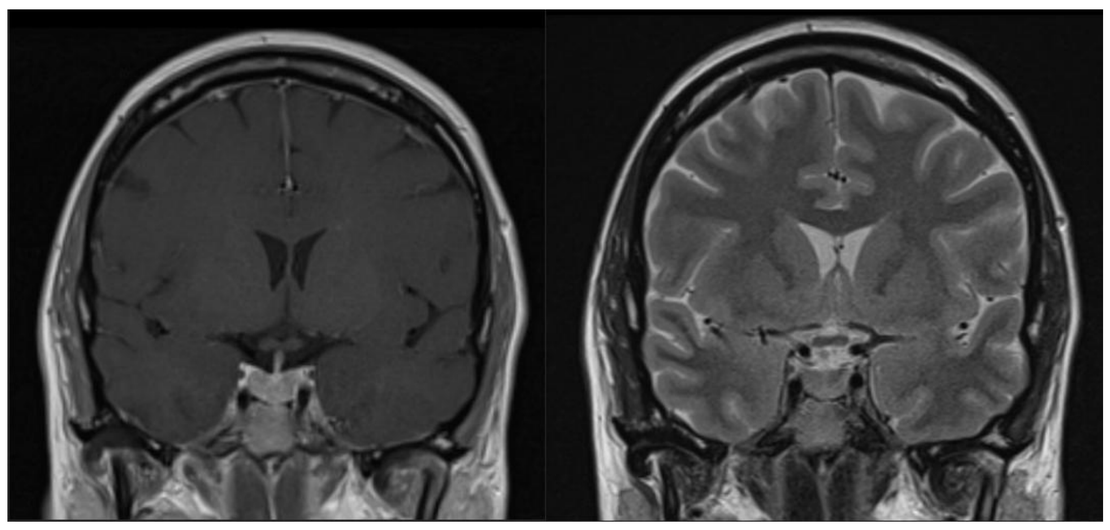
Coronal T1 post contrast and T2 sequences showing sellar engorgement and pachymeningeal enhancement

## FIGURE 2




Sagittal MRI STIR sequence showing interspinous ligament hyperintensity and fluid collection consistent with iatrogenic cerebrospinal fluid leak

## FIGURE 3



Coronal T1 post contrast and T2 sequences three-weeks after blood patch showing significant improvement in sellar engorgement and resolution of pachymeningeal enhancement.

## CONCLUSION

Intracranial hypotension can be mistaken for pituitary apoplexy. In patients who have undergone recent spinal procedures, there must be a high index of suspicion for post procedural cerebrospinal fluid leak