

Barriers to implementing an optimal treatment plan in idiopathic intracranial hypertension

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Introduction

Objective: We present a case of IIH that demonstrates the complexity of implementing the recommended treatment plan.

- idiopathic intracranial hypertension (IIH): a pathology of unknown cause characterized by high pressure within the skull
- Risk factors: female, overweight or obese, reproductive age ^{1,2}







- Symptoms: frequent severe headaches, peripheral vision loss, & temporary visual disturbances
- Management:
 - ☐ weight loss
 - carbonic anhydrase inhibitors (acetazolamide, topiramate, methazolamide)
 - ☐ furosemide

Methods

Retrospective chart review of a single case of idiopathic intracranial hypertension in Regina, SK

Case

- 21-year-old obese female with 5-month history of transient visual blurring and complete bilateral vision loss lasting several seconds upon waking each morning
- chronic daily headache with occasional tinnitus

Ht: 174 cm

Wt: 124.7 kg

BMI 41.2

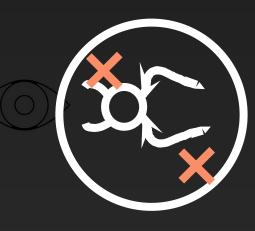
 $\sqrt{\frac{20}{20-2}}$

P < 3

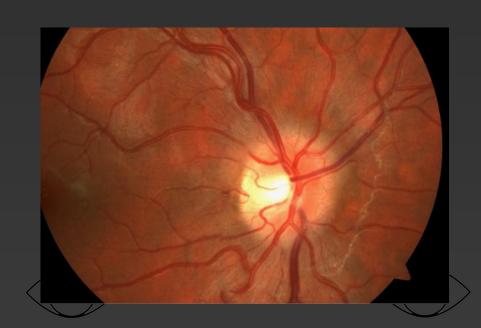
brisk, no RAPD OU

Tap < 18 16





- optic nerve edema, papilledema bilaterally, normal extraocular movements
- flame hemorrhages superonasally and inferotemporally
- Humphrey visual field testing: bilateral scattered scotomas





- Lumbar puncture: 34 cmH2O opening pressure; normal CSF composition
- MRI/ MRV: fluid-filled, dilated optic nerve sheaths, stenoses of transverse sinuses
- Final diagnosis: idiopathic intracranial hypertension

Treatment Course over Time

Jan 2020

Apr 2019

Acetazolamide 1000 mg

Jun 2019

Oct 2019

Apr-May 2020

Acetazolamide 1000 mg
6.8 kg total weight loss

Acetazolamide 1325 mg
Triptan trials

9.1 kg total weight loss

Acetazolamide 1000 mg
Topiramate 50 mg
Acetazolamide 1500 mg

Furosemide 20 mg
11.3 kg total weight loss

Acetazolamide 1250 mg

Sep 2020

Discussion

Recommended Management of IIH:3,4

- weight loss with low-sodium diet
 - > 6% weight loss required for benefit
- PO acetazolamide 4 g/day
 - ADR: paresthesia, nausea, metallic taste
- topiramate
- ADR: drowsiness, paresthesia, blurred vision
- furosemide
- recommended if refractory to acetazolamide

Despite current treatment recommendations, the low likelihood of sufficient, sustained weight loss and adverse drug reactions limit the feasibility of implementing the recommended management plan for IIH.

References

- 1. Idiopathic Intracranial Hypertension [Internet]. NORD. 2021 [cited 2021 Jul 30]. Available from: https://rarediseases.org/rare-diseases/idiopathic-intracrapial-hypertension/
- 2. Silberstein S. Idiopathic Intracranial Hypertension [Internet]. Merck Manual Professional Edition. 2021 [cited 2021 Jul 30]. Available from: https://www.merckmanuals.com/en-ca/professional/neurologic-
- Wall M, Lee A. Idiopathic intracranial hypertension (pseudotumor cerebri): Prognosis and treatment [Internet]. UpToDate. 2021 [cited 2021 Jul 30]. Available from: https://www.uptodate.com/contents/idiopathic-intracrania
- 4. Wall M, McDermott M, Kieburtz K, Corbett J, Feldon S, Friedman D et al. Effect of Acetazolamide on Visual Function in Patients With Idiopathic Intracranial Hypertension and Mild Visual Loss. JAMA. 2014;311(16):1641.

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