

Post Measles Pseudotumor Cerebri: 1st Reported Case in Adult

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How to citation this article: Dr. Darpan Kothia, Dr. Priyanka Rabadia, Dr. Mansi Gupta, Dr. Raj Gabani, Dr. Dharmik Doshi, Dr. S. S. Chatterjee, Dr Yugam R Oza, “Post Measles Pseudotumor Cerebri: 1st Reported Case in Adult”, IJMACR- December - 2023, Volume – 6, Issue - 6, P. No. 119 – 122.

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Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Background: 26 year male health-care worker had presented with complaints of headache and vomiting since 6 days, with fundoscopic examination showing bilateral disc edema. Patient had measles infection 30 days back.

Investigations/Methods: Serum Measles IgM 22.53 NTU with typical skin eruption, which was resolved by conservative treatment after 7 days. Physical and neurological examination was normal, MRI brain with venography and CSF opening pressure was 32cm H₂O, normal levels of protein and glucose.

Results: No other causative factors for raised intracranial hypertension was found, and further

investigation revealed that the patient had post measles pseudotumor cerebri.

Conclusion: Pseudotumor cerebri is diagnosis of exclusion, which should be considered in post measles patient with persistent headache with signs of raised intracranial tension with papilloedema, with normal MRI, and CSF findings.

Keywords: Measles, Pseudotumor Cerebri

Introduction

Pseudotumor cerebri also known as idiopathic intracranial hypertension (IIH) is defined by a modified Dandy criteria^[1] including,

Symptoms and signs of increased intracranial pressure (eg, headache, transient visual obscurations, pulse synchronous tinnitus, papilledema, visual loss)

No other neurologic abnormalities or impaired level of consciousness

Elevated intracranial pressure with normal cerebrospinal fluid (CSF) composition.

A neuroimaging study that shows no etiology for intracranial hypertension

No other cause of intracranial hypertension apparent

Case Report

26 year old male Asian patient, a health care worker, presented with complaints of headache (right side predominant, continuous, dull aching) which gradually increased in intensity till last 7 days with nausea and vomiting. On day of presentation patient had 6 episodes of vomiting.

On examination patient was conscious oriented, vitally stable with normal blood pressure and heart rate. No fever, no meningeal signs were present. Fundoscopy showed bilateral disc edema. On further evaluation MRI brain with venography was done, which was negative for any space occupying lesion, meningeal enhancement of venous sinus thrombosis.

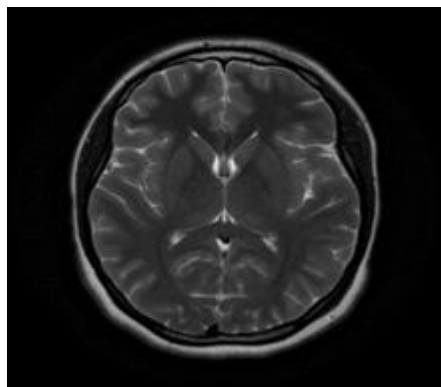


Figure 1: Normal MRI brain with venography in patient with idiopathic intracranial hypertension.

30 days before presentation, patient had measles infection with typical morbilliform rashes over bilateral hands and abdomen with high grade fever, which lasted for 7 days.



Figure 2,3: bilateral nasal disc swelling in patient with post measles IIH.



Figure 4, 5: Typical skin rashes on both forearms and trunk in patient before one month with measles IgM positive.

Investigation

Investigations	20-Oct-22	24-Oct-22	20-Nov-2022	23-Nov-22
Hb (gm/dl)	14.6	13.1	13.6	
WBC (cells/cumm)	3,800	3,700	9,400	
Platelet (lakhs/cumm)	197,000	266,000	242,000	
Creatinine (mg/dl)	1.0	0.9	1.0	
DENGUE NS1	Negative			
S. SGPT (unit/L)	742	543	52	43
Measles IgM ELISA	-	22.53	43.65	

CSF routine micro			Normal	
CSF opening pressure			32mm H ₂ O	
CSF HSV, Enterovirus ELISA				Negative
D-fundus			Bilateral disc swelling	Bilateral disc swelling

Table 1: Investigations

Patient was started on tablet acetazolamide, injection dexamethasone (8mg intravenous 12 hourly). Patient improved after 5 days of treatment. After which patient had stopped taking treatment.

6 days after stopping treatment, headache relapsed and fundoscopy showed similar disc edema. Patient was again started on long term acetazolamide (500mg 12 hourly for 3 months, followed by 250 mg 12 hourly for next 3 months) with 3 monthly follow up.

At 6 month and 1 year follow up, patient remained asymptomatic and dilated fundus showed normal findings.

Discussion

Mechanism of post infection/idiopathic intracranial hypertension is not properly understood. Multiple condition may mimic pseudotumor cerebri clinically including intracranial mass lesions (tumor, abscess), obstruction of venous outflow (e.g., venous sinus thrombosis, jugular vein compression) , obstructive hydrocephalus, decreased cerebrospinal fluid (CSF) absorption (eg, arachnoid granulation adhesions after bacterial or other infectious meningitis, subarachnoid hemorrhage), most of the conditions are excluded by magnetic resonance imaging (MRI). Magnetic resonance venography (MRV) is often required to exclude conditions causing venous outflow obstruction. In

particular, cerebral venous thrombosis (CVT) can have a very similar clinical presentation as IIH [2]

There is different neurological complication that results post measles: [3]

- Acute post-infectious encephalitis, 10-14 days after measles
- Measles inclusion body encephalitis, 3 to 6 months post measles
- Subacute sclerosing panencephalitis, 2-10 years post primary measles infection.

Only one case of post-Measles IIH has been recorded till now in 8 year old female [3], while multiple case of post measles vaccine IIH has been recoded[4]. This is the first adult case of post measles IIH reported till now.

Conclusion

Pseudotumor cerebri is diagnosis of exclusion, which should be considered in post measles patient with persistent headache with signs of raised intracranial tension with papilloedema, with normal MRI, and CSF findings.

Acetazolamide tablet for 3 months to 1 year with periodic monitoring of fundoscopy in necessary to prevent vision defect.

Declaration

- Funding – The author(s) received no financial support for the research, authorship, and/or publication of this article.
- Conflicts of interest/Competing interests - All authors declare that they have no conflicts of interest.
- Ethics approval – Ethical approval is not applicable for this article.
- Consent to participate – Written informed consent was obtained from the patient.

- Consent for publication- Written informed consent was obtained from the patient for their anonymized information to be published in this article.
- Availability of data and material- All data underlying the results are available as part of the article and no additional source data are required.
- Code availability – Not applicable

Authors' contributions:

Drafting of the manuscript content, including medical writing of content: Dr. Darpan Kothia, Dr. Priyanka Rabadia.

Analysis and interpretation of data: Dr. S.S. Chatterjee

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