# A CASE OF IDIOPATHIC INTRACRANIAL HYPERTENSION WITH IRON DEFICIENCY ANEMIA

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## BACKGROUND AND AIMS

✪Idiopathic intracranial hypertension is defined as raised intracranial pressure without evidence of a detectable cause

✪global incidence of 12–20 per 100,000.

✪Iron deficiency anemia has been reported as a rare association with IIH

✪Here we report a rare case of iron deficiency anemia with partial optic atrophy with idiopathic intracranial hypertension

## METHODOLOGY

✓18 year nonobese girl with past history of IIH 5 year back without any other comorbidities

✓now presented with severe bifrontal headache with vomiting for last 1 week .

❖examination revealed pallor with preserved visual acuity, field of vision and color vision, extraocular movement with bilateral partial optical atrophy.

❖examination of motor, sensory and other systems were normal.

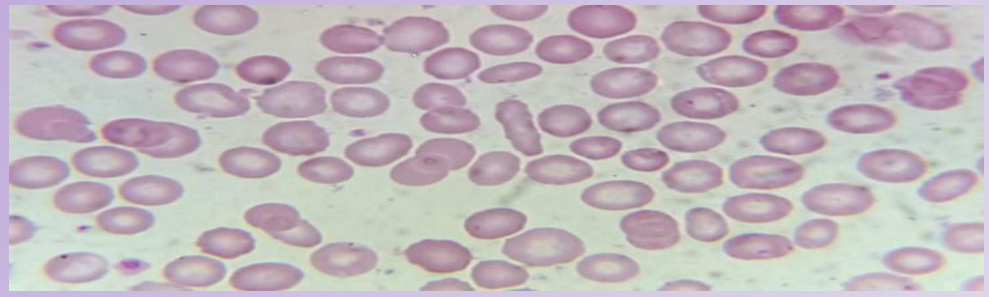
## INVESTIGATIONS

✪ Csf pressure 460 mm H2O and acellular with normal glucose , protein and LDH.

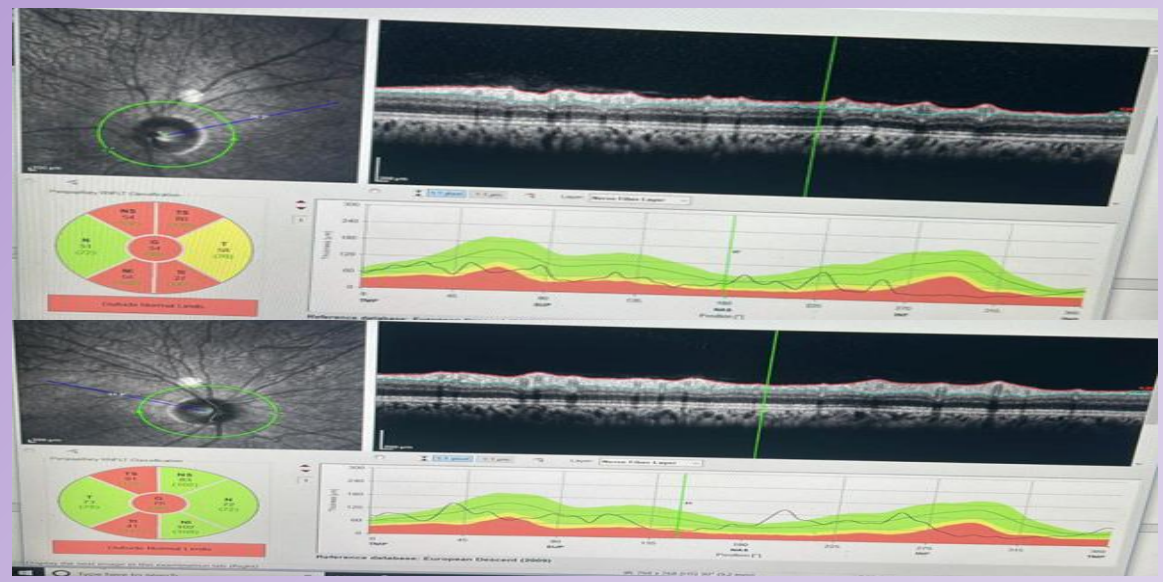
✪ Hemoglobin 6.2 g/dl, MCV 64fl.peripheral smear-hypo chromic microcytic anemia and iron profile showed reduced iron and increased total iron binding capacity

✪ ESR 45,TSH 1.4,USG abdomen-normal with normal sickling test and stool occult blood test

✪ normal LFT,RFT and ANA profile



✪ MRI brain showed posterior scleral flattening of bilateral globe with bilateral prominence of perioptic space [5mm]and tortuous bilateral optic nerve in intra orbital compartment



✪Optical coherence tomography showed bilateral partial optic atrophy [left>right] secondary to chronic IIH.

✪ Treated with mannitol, acetazolamide, csf drainage, blood transfusion and iron suppliments.

✪Patient symptomatically better after treatment and discharged.

## DISCUSSION

✪Iron inhibit thrombopoiesis and thrombocytosis often develop in iron deficiency anemia and results in a hyperviscous state with increased venous pressure.

✪Increased venous pressure decreases the rate of csf resorption at the level of arachnoid villi, results in elevated intra cranial pressure.

✪ tissue hypoxia induced altered cerebral hemodynamics in iron deficiency anemia leads to increased brain capillary permeability and increased intracranial pressure.

✪ Dysfunctional iron hemostasis causing altered CSF dynamics and raised ICP

## CONCLUSION

✪Treatment of idiopathic intracranial hypertension with anti- edema measures and evaluation and treatment of iron deficiency anemia have good recovery

## REFERENCES


- Tugal O, Jacobson R, Berezin S, Foreman S, Berezin S, Brudnicki A, et al Recurrent benign intracranial hypertension due to iron deficiency anaemia. Case report and review of the literature. Am J Pediatric Hematol Oncol. 1994; 16: 266–270.
- Mollan SP, Ball AK, Sinclair AJ, Madill SA, Clarke CE, Jacks AS, et al. Idiopathic intracranial hypertension associated with iron deficiency anaemia: a lesson for management. Eur Neurol. 2009;62(2):105–8
- Sim, P.Y., Taribagil, P., Woollacott, I.O.C. et al. Idiopathic intracranial hypertension presenting as iron deficiency anemia: a case report. J Med Case Reports 15, 45 (2021)