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'A CASE REPORT OF INCREASED INTRACRANIAL PRESSURE WITH PAPILLOEDEMA IN GUILLAIN-BARRE SYNDROME'

Paediatric Medicine

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ABSTRACT

Guillain-Barre syndrome(GBS) is an inflammatory autoimmune demyelinating polyneuropathy that affect mainly motor but also sensory and sometimes autonomic nerves1.13 yr old female child presented with progressive weakness, after few days she developed headache. History suggested of no significant past medical events or infections.On examination central nervous system revealed Normal Higher motor function but Weakness of extremities, Areflexia and Neck stiffness was present. Investigations were done. Magnetic Resonance Imaging(MRI) Brain was Normal. Nerve conduction study was suggestive of motor axonopathy. Fundus examination suggestive of bilateral grade 3 Papilloedema with normal visual acuity. CSF study showed elevated CSF protein with no nucleated cells.Patient treated with Intravenous Immunoglobulin (IVIG) 0.4g/kg/day for 5 days and Inj Mannitol for 3 days. Patient improved clinically.Incidence of Papilloedema in GBS in children is rare. Early diagnosis in conjuction with early initiation of immunotherapy may help in early recovery and may avoid loss of vision.

KEYWORDS

Guillain-Barre syndrome(GBS), Papilloedema, Intracranial pressure, Cerebro spinal fluid(CSF), Intravenous Immunoglobulin(IVIG).

INTRODUCTION:

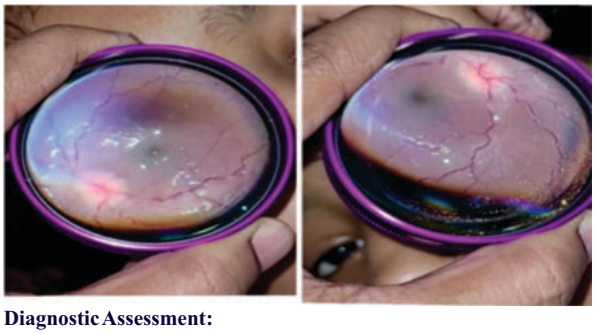
Guillain-Barre syndrome(GBS) is an inflammatory autoimmune demyelinating polyneuropathy that affect mainly motor but also sensory and sometimes autonomic nerves. Papilloedema and increased intracranial pressure is seen in some patients(4.29%)[1], may be because of increased Cerebro spinal fluid(CSF) protein. Papilloedema is usually rare finding in GBS and asymptomatic most of the times. In few patients it may present with visual loss. Increased CSF protein level will cause imbalance of CSF absorption at the arachnoid villi[2]

Patient Information:

13 year old female child presented with progressive weakness of lower limbs since 8days and vomiting since 4days. After few days she developed headache. History suggested of no significant past medical events or infections.

Clinical Findings:

On examination central nervous system revealed, Normal Higher motor function, hypotonia of lower limbs, Power in lower limbs was grade 1+, Areflexia of lower limb and Neck stiffness was present. Upper limbs were normal. Kernig's sign and Brudzinski's neck and leg sign was positive. Fundoscopic examination showed grade IV papilledema as shown in fig 1. Visual acuity was normal.



Diagnostic Assessment:

MRI brain was normal. MRI Spine was suggestive spasm of paraspinal muscle. NCV study- predominant motor axonopathy affecting arms and legs .CSF analysis showed elevated protein with no nucleated cells.

Therapeutic Intervention:

Patient was administrated Intravenous immunoglobulin 0.4g/kg /day which was given for 5days. Injection mannitol 100cc given for 3 days to reduce intracranial pressure. Antibiotics and symptomatic treatment given.

DISCUSSION:

GBS is acute demyelinating polyneuropathy. The CSF proteins were elevated in the cases reported earlier. These elevated proteins were postulated to cause a defect in the proper absorption of CSF at the arachnoid villi, giving rise to raised intacranial pressure. Few cases of hydrocephalus associated with GBS have also been explained on the basis of the same theory. Joynt, however, postulated that the papilledema may be secondary to cerebral edema. Edema of the spinal nerve rootlets seen in GBS has been implicated in causing decreased absorption of proteins at this level and contribute to the raised CSF protein. Pseudotumor cerebri has also been reported with acute inflammatory demyelinating polyradiculoneuropathy (AIDP) but there is only one reported case of raised intracranial pressure in a patient of AIDP, where the CSF protein was normal. Our patient presented with weakness, vomiting and headache. Fundus examination revealed papilledema. Based on NCV study, we diagnosed it as GUILLAIN BARRE'S SYNDROME. Patient was recovered completely after administration of intravenous immunoglobulin and mannitol. GBS with papilledema and increased intracranial pressure is due to reduced absorption of proteins.

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