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RESEARCH ARTICLE

DYNAMIC NECK STIFFNESS: A NEW AND INTERESTING SIGN OF IDIOPATHIC INTRACRANIAL HYPOTENSION

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ABSTRACT

Elicitation of neck stiffness is one of the most important clinical signs in neurology. It is the inability to flex the neck forward due to rigidity of the neck muscles. It is a sign of irritation of the meninges, such as seen in meningitis, subarachnoid hemorrhage and various other diseases. Nuchal rigidity occurs in 30 % of meningitis in adults and does not have postural variation and is accompanied by positive Kernig's sign, positive Brudzinski's sign. Here we report a case of secondary headache due to idiopathic intracranial hypotension with neck stiffness having postural variation(dynamic neck stiffness) which has never been described previously.

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INTRODUCTION

A 33 year old lady with no comorbid illness presented to our outpatient department with complaints of headache since 5 days. The headache was sudden onset, pulling in character and occurred within 2 minutes on assuming upright posture and was relieved completely in recumbent position. She gave no history of trauma to her head and neck and had not experienced any fever, rashes, photophobia, cough, tinnitus, or deafness. There was no history of lifting heavy weight or straining while passing stool. She had a normal neurological examination in the recumbent posture. While she was made to sit her headache started developing in one minute and a neurological examination at that time demonstrated neck stiffness, characterized by an inability to flex the neck forwards. The stiffness readily disappeared (within one minute) on recumbent posture demonstrating the dynamic nature of the neck stiffness. Diagnosis of intracranial hypotension was made based on clinical history of postural headache and MRI findings of meningeal enhancement, slit like ventricles, sagging of midbrain. MRI of the spine demonstrated a dural leak at D4 and D5 level. She was given conservative medical management with no improvement. She had complete relief from autologous epidural blood patch. There was no neck stiffness post epidural blood patch.

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DISCUSSION

Meningism is the triad of nuchal rigidity (neck stiffness), photophobia (intolerance of bright light) and headache. Meningism is commonly seen in patients with meningitis and subarachnoid hemorrhage. Intracranial hypotension is a rare cause of meningism (Headache classification subcommittee of the INTERNATIONAL HEADACHE SOCIETY, 2004 and Schievink, 2006). In meningitis, headache and neck stiffness is constantly present in all postures. Headache secondary to intracranial hypotension is characterized by an orthostatic headache, that is, one that occurs or worsens with upright posture and usually occurs within 15 minutes (Pankaj Agarwal, 2009). Neck stiffness is described in idiopathic intracranial hypotension but its dynamic nature has not been mentioned or highlighted in the past. Dynamic neck stiffness appears to be a characteristic feature of idiopathic intracranial hypotension. Postural headache and postural neck stiffness which disappears on recumbency are the hallmarks of this disease and will aid in an early diagnosis idiopathic intracranial hypotension if carefully elicited during the initial evaluation by the treating physician. This sign is interesting and has never been described previously in literature. The probable explanation for this sign could be dynamic herniation of cerebellar tonsils due to worsening of the intracranial hypotension during upright

posture. As MRI is done in the supine posture it may not always be possible to demonstrate this herniation as it may occur only in the upright posture. Disappearance of neck stiffness post epidural blood patch in this case may further add proof to dynamic nature of events.

REFERENCES

Headache classification subcommittee of the International headache society. The International classification of headache disorders. 2nd ed. Cephalgia 2004; 24(suppl 1):9-160.

Pankaj Agarwal, Suresh Menon, Rajan Shah, B. S. Singhal. Spontaneous intracranial hypotension: Two cases including one treated with epidural blood patch. *Ann Indian Acad Neurol.* 2009 Jul-Sep; 12(3): 179–182.

Schievink, W.I. 2006. Spontaneousspinalcerebrospinal fluid leaks and intracranial hypotension. *JAMA*, 295: 2286-96.

Thomas, K.E., Hasbun, R., Jekel, J., Quagliarello, V.J. 2002. The diagnostic accuracy of Kernig's sign, Brudzinski's sign, and nuchal rigidity in adults with suspected meningitis. *Clin Infect Dis.* Jul 1., 35(1):46-52.

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