



Image in Headache Medicine

Brainstem tumor as a cause of headache triggered by Valsalva maneuver

Marcelo Moraes Valença¹  Martina Falcão Valença²  Juliana Ramos de Andrade¹  Elayne Cristina de Oliveira Ribeiro¹  Luiz Severo Bem Junior¹  Ana Cristina Veiga Silva¹  Rita de Cássia Ferreira Valença Mota¹  Ubiratan Alves Vitorino da Silva¹  José Ronaldo Lessa Angelo Júnior¹ 

¹Federal University of Pernambuco, Recife, Pernambuco, Brazil.

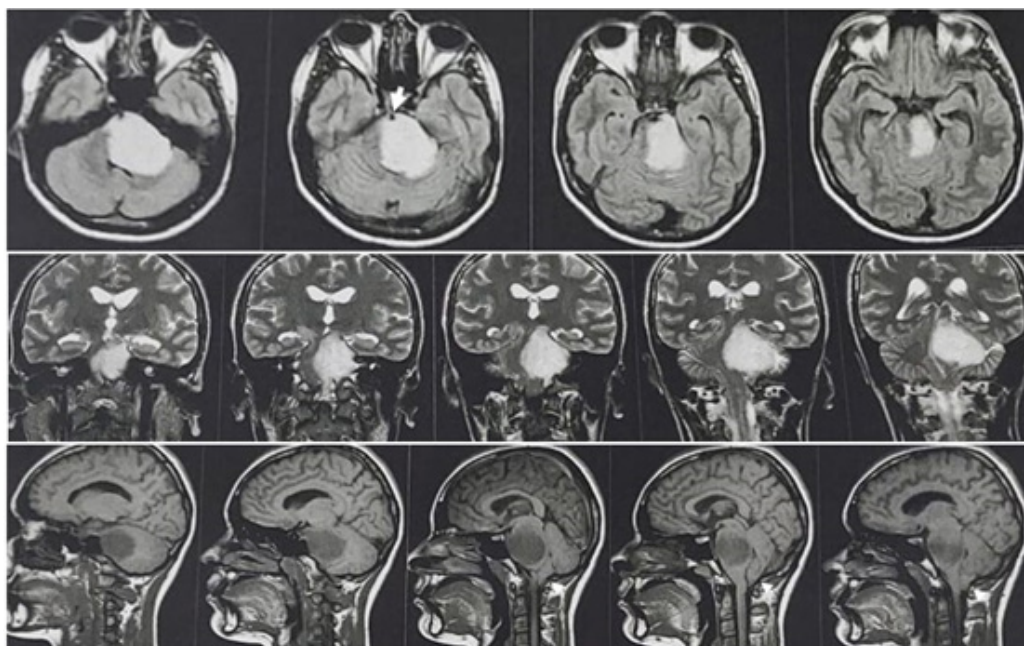
²International Neuroscience Institute-Hannover, Germany

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Marcelo Moraes Valença
mmvalenca@yahoo.com.br

Edited by
Mario Fernando Prieto
Peres

Expansive lesions of the posterior fossa or the malformation in the occipitocervical transition can cause headache triggered by Valsalva maneuver, usually of sudden onset and of significant intensity, which usually lasts for a short time.¹⁻⁷ Brainstem tumor is rarely related to cause headache⁸, hence the interest in documenting this patient's case in this article.

Figure 1 shows an MRI image of the head of a 26-year-old woman who reported a history of headaches from straining to defecate and when sneezing, with a gradual progression in the previous three years. Pain is holocranial, of sudden onset, very severe, lasting a few seconds or minutes.



Keywords:
Valsalva Maneuver
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Figure 1. MRI of an expansive/infiltrative lesion affecting the brainstem, particularly the left pons and the left middle cerebellar peduncle, and partially the cerebellar hemisphere, extending beyond the midline to the right in the pons. The lesion expands anteriorly, significantly reducing the prepontine cistern, partially involving the basilar artery (arrow), slightly shifting to the right. Due to compression of the cerebrospinal fluid pathways, there is a slight dilation of the supratentorial ventricles, without signs of ependymal transudation. There is a herniation of the cerebellar tonsils through the foramen magnum (arrow heads).

She now has a mild motor deficit in the right lower limb, mild peripheral facial palsy on the left, and hypoesthesia in the left hemiface.

The secondary herniation of the cerebellar tonsils through the foramen magnum may change the cerebrospinal fluid dynamic significantly, causing abrupt elevation of the intracranial pressure, triggering painful mechanisms.^{9,10} Although headaches triggered by the Valsalva maneuver may be considered benign, patients with such complaints should be investigated by neuroimaging.^{11,12}

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Marcelo Moraes Valença

<https://orcid.org/0000-0003-0678-3782>

Martina Falcão Valença

<https://orcid.org/0000-0002-4085-3118>

Juliana Ramos de Andrade

<https://orcid.org/0000-0002-5445-8872>

Elayne Cristina de Oliveira Ribeiro

<https://orcid.org/0000-0002-5243-3356>

Luiz Severo Bem Junior

<https://orcid.org/0000-0002-0835-5995>

Ana Cristina Veiga Silva

<https://orcid.org/0000-0002-1149-4427>

Rita de Cássia Ferreira Valença Mota

<https://orcid.org/0000-0003-3588-788X>

Ubiratan Alves Vitorino da Silva

<https://orcid.org/0000-0002-7715-8258>

José Ronaldo Lessa Angelo Júnior

<https://orcid.org/0000-0002-4772-3471>

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