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Received: 05 Oct 2024 - **Accepted:** 02 Feb 2025 - **Published:** 18 Feb 2025

Keywords: Type I Arnold Chiari, bifid spine, Chiari 1 malformation

Cite this article: Aditi Pradip Ambekar et al. Type I Arnold Chiari malformation with an accompanying bifid spinous process at the C3 vertebra in a 19-year-old female. PAMJ Clinical Medicine. 2025;17(18). 10.11604/pamj-cm.2025.17.18.45495

Available online at: https://www.clinical-medicine.panafrican-med-journal.com//content/article/17/18/full

Type I Arnold Chiari malformation with an accompanying bifid spinous process at the C3 vertebra in a 19-year-old female

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Image in medicine

A 19-year-old female individual presented with principal complaints of vertigo and recurrent cephalgia, accompanied by cervical discomfort persisting for 4-5 months, as well as instability during ambulation and paresthetic sensations in all four extremities for 5 months. Magnetic Resonance Imaging (MRI) findings indicated mild bilateral herniation of the cerebellar tonsils, resulting in the effacement of the cisterna magna and overcrowding at the foramen magnum, which is suggestive of a type I Arnold Chiari malformation. The evaluation revealed a bifid posterior spinous process of the C3 vertebra, characterized by minimal loss of cervical lordosis and straightening of the cervical spine. Subsequently, the patient underwent surgical intervention for foramen magnum decompression which was conservatively managed with intravenous antibiotics, antacids, antiemetics, analgesics, and various supportive treatments. For further rehabilitation, the patient was referred to a physiotherapist. During the physical examination, she exhibited shoulder pain and weakness in her upper limbs, which was assessed at MRC grade 3. Chin tucks, Myofascial Release (MFR) techniques targeting trapezius tension, and exercises aimed at enhancing cervical range of motion constituted integral components of the physiotherapeutic rehabilitation regimen. It has been ascertained that an integrative approach encompassing medical, surgical, and rehabilitative therapies enhances therapeutic efficacy.

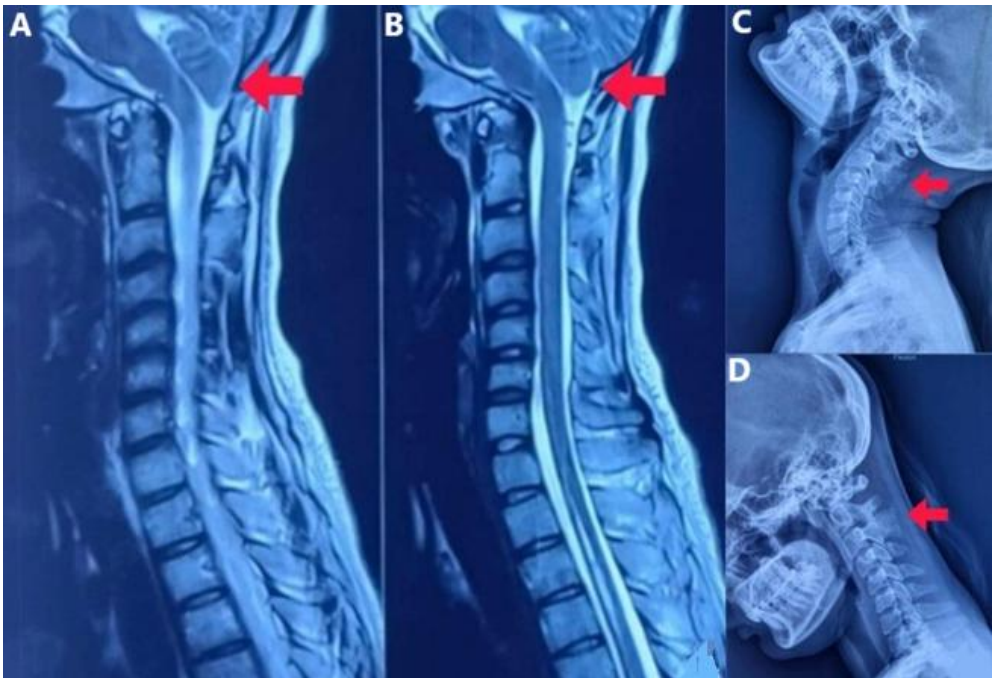

Figure 1: A, B) type I Arnold Chiari malformation; C, D) bifid spinous process at C3 vertebra