



## LETTER TO EDITOR

# Yellow Ligament Ossification of Cervical Spine-Must Know for a Clinician

Sharat Agarwal\*

Department of Orthopaedics & Trauma, NEIGRIHMS (Govt. of India), Shillong, India



\*Corresponding author: Sharat Agarwal, Professor (Ortho & Trauma) & Incharge Pediatric Orthopaedics, Department of Orthopaedics & Trauma, NEIGRIHMS (Govt. of India), Shillong, India

I read with great interest, the case report entitled “Unusual site of yellow ligament ossification-cervical spine” with citation details as Mahmoodkhani M, Askariardebhani N (2022) Unusual site of yellow ligament ossification cervical spine. Clin Med Rev Case Rep 9:397. doi.org/10.23937/2378-3656/1410397, published in your esteemed journal recently.

Cervical OLF is typically reported in the Asian, followed by the Caucasian population, and is most often found in the thoracolumbar spine as has been highlighted by the author.

However, we thought it is important to mention certain key information's lacking which clinicians should be aware of, while evaluating the patients of COL. Patients with cervical OLF often present late in the clinical course with cord compression/spondylosis resulting in chronic myeloradiculopathy and an evolving quadriplegia. The clinical presentation may vary, but typically sensory symptoms are the first to manifest (mimicking an intrinsic posterior cord syndrome) before motor symptoms [1].

An absent or lessened capsular portion of the ligamentum flavum in the cervical spine results in the fact that it does not adhere to the bony tissue directly. On the other hand, the mobility of cervical segments is greater than that of thoracic segments, in which the tensile forces are always static, thus appropriate stress stimulation may induce the process of local ossification [2].

The etiology of OLF is unclear [3] but some of the postulated causes and associations are: Trauma and

fractures, skeletal fluorosis, ankylosing spondylitis, diabetes mellitus, diffuse idiopathic skeletal hyperostosis (DISH), thyroid and parathyroid disease, haemochromatosis, crystal deposition disease (calcium pyrophosphate dihydrate) and ageing. Biochemical analysis for finding about these disorders is also important. Author has not mentioned about it in the report presented here.

Also, it is pertinent to note COPLL affected more segments than COLF. Posterior longitudinal ligaments spread across multiple intervertebral levels but ligamentum flavum spans a single intervertebral level [4].

Yayama, et al. [5] reported that certain metabolic disorders may promote the ossification of ligaments and that specific osteogenic cytokine, including bone morphogenetic protein 2 and transforming growth factor- $\beta$ , may have a role in the development of ossification.

It is worthy to note that considering the global increase in population with obesity, diabetes, metabolic syndrome, and prolonged life expectancy, which are all positively associated with the occurrence and progression of COLF [6].

Coexistence of other cervical spine ligament ossification such as DISH should be considered in surgical management [4,7,8].

In the cervical spine, the combination of ossified ligamentum flavum (OLF) and ossified posterior longitudinal ligament (OPLL) has rarely been seen [9-15].



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A decompressive laminectomy with excision of OLF may be warranted in symptomatic patients. The OLF dissection from the dura should be accomplished under the operating microscope to lyse adhesions. Li, et al. described decompressive en-block laminectomy for removal of OLF [16]. Epstein, in 1999, proposed posterior stabilization for multilevel cervical OLF following extensive laminectomy [17]. Dural tears should largely be avoided routinely using an operating microscope. If they occur, closure with 7-0 Gortex sutures and microdural stapes is warranted.

The latest inclusion of ultrasonic osteotome has the advantage of tissue selectivity and eliminates the dangerous rotatory motion of the high-speed burr, thus allowing a more safe removal of C-OLF [18].

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