

## Ossification Of Superior Transverse Scapular Ligament

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**Abstract:** The superior transverse scapular ligaments (STSL) bridges the suprascapular notch, located medial to the root of coracoid process of the scapula, and convert it into suprascapular foramen. The suprascapular nerve traverses through the suprascapular foramen of scapula. Sometime ossification of STSL results in compression of suprascapular nerve producing symptoms of suprascapular nerve neuropathy. An unusual variation of STSL ossification was encountered during routine dissection. The knowledge of this rare anatomical variation should be kept in mind by the clinicians and surgeons approaching painful syndrome of the shoulder, suprascapular nerve neuropathy and various surgical procedures of suprascapular nerve decompression. [Dwivedi A NJIRM 2016; 7(1):125-126]

**Key Words:** ossification, scapula, superior transverse scapular ligament, suprascapular foramen, suprascapular notch.

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**Introduction:** The scapula is a flat, triangular bone of shoulder girdle situated posterolateral aspect of chest wall<sup>1</sup>. The suprascapular notch is present on superior border of the scapula, just medial to the base of coracoid process. It is converted into a foramen by superior transverse scapular ligaments (STSL)<sup>1</sup>. Suprascapular foramen transmits suprascapular nerve, while suprascapular vessels pass above the ligament.

The suprascapular nerve supply motor branches to the Supraspinatus, Infraspinatus and sensory branches to the rotator cuff muscles, and the ligaments of shoulder and acromioclavicular joint<sup>2</sup>. Suprascapular notch shows many variations, such as ossification of STSL<sup>3</sup>. This region is the most common site of suprascapular nerve injury, and ossification of STSL is the one of the most important predisposing factor of this neuropathy<sup>4</sup>.

The present study aims to report the variation of STSL, and to discuss its clinical implications, which may be helpful for clinicians, surgeons, and academicians in day to day practice.

**Case Report:** During routine educational dissection procedure, an unusual variation of superior transverse scapular ligament ossification was encountered in an adult male scapula on left side. The anomalous bone specimen was studied in detail and the specimen was photographed (figure1).

**Discussion:** The suprascapular notch is frequently bridged by bone rather than a ligament, converting it into foramen in some animals but incidence is much less in humans<sup>5</sup>. In human suprascapular foramen is a result of ossification of superior transverse scapular ligament

(STSL), which is the predisposing factor to suprascapular nerve entrapment syndrome<sup>1</sup>.

S nagaraj et al<sup>6</sup>. reported completely ossified suprascapular ligament converting the notch into a foramen in 2.88% of scapulae. Saritha<sup>7</sup> and Polgaj et al<sup>8</sup>. reported coincidence of suprascapular notch and foramen in .33% and 1% of population respectively. Mistry et al<sup>9</sup>. and U Desai<sup>3</sup> revealed occurrence of suprascapular foramen in 19.44% and 16% of scapulae respectively with predilection for right side.

The suprascapular nerve gives motor branches but it does not supply the skin, so its irritation produces deep pain which is poorly localised<sup>10</sup>.

**Figure 1: Photograph of the Scapula (Arrow- ossified superior transverse scapular ligament)**



**Conclusion:** Present case demonstrates complete ossification of superior transverse scapular ligament. The anatomical knowledge of ossified superior transverse scapular ligament is of extreme importance for clinicians, while dealing with painful syndromes of shoulder, as well as, this anatomical curiosity should be kept in mind by students and surgeons who may manipulate this anatomical region.

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