

RESEARCH ARTICLE

CONGENITAL ELEVATION OF SCAPULA IN CHILDREN: ABOUT 7 CASES

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Manuscript Info Abstract

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Key words: Elevation, Scapula, Child, Omo-Vertebral Bone, Abduction The congenital elevation of the scapula, also known as "Sprengel" deformity, is a rare condition characterized by a high, dysmorphic scapula. We report a series of 7 cases of scapula elevation, collected at the Department of Traumatology- Pediatric Orthopedics of CHU Hassan II of Fez, over a period of 6 years, from November 2010 to September 2016.

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Introduction:-

The congenital elevation of the scapula is a rare condition, characterized by the abnormally high position of the scapula more or less dysmorphic due to the stop of its caudal migration in utero. It is often found in children at a young age.

The reason for consultation is most often due to an aesthetic injury or loss of abduction.

Imaging is essential to establish a classification; search for vertebral Omo bone and exploration of the spine

The treatment is aimed at the release of the para-scapular muscles allowing to lower the scapula with possible resection of the omo-vertebral bone.

Methods:-

This is a series of 7 cases of scapula elevation, collected at the Department of Traumatology-Pediatric Orthopedics of the CHU Hassan II of Fez, over a period of 6 years, from November 2010 to September 2016

Results:-

The average age of our patients is 2.58 years, with extremes of 1 to 5 years. 5 of our patients were female. The right side was reached in 4 cases (75.14%), The finding of the asymmetry of the two shoulders is the most frequent reason for consultation.

Treatment was indicated in 5 patients: 3 of our patients benefited from the release of the trapezius

The clinic is polymorphic (Figure 1 and 2), the limitation of abduction is present in 5 cases. The standard radiography (FIG. 3) carried out in research vertebral malformations and also makes it possible to establish a classification of the degree of the elevation of the scapula. The surgical

Corresponding Author:Hind Cherrabi Address:Assistant Professor of Pediatric Surgery,Faculty of Medicine and pharmacyof Agadir. University Ibn Zohr Morocco. Patients showing the presence of the omo-vertebral bone in 2 children is in 28.57%. muscle and lowering of the scapula. In addition, 2 patients underwent resection of the omo-vertebral bone. The imaging represented by thoracic CT with bone reconstruction (FIG. 4) made in all ourposition at the 12th week.

Discussion:-

The Congenital Elevation of Scapula (SCS) was described in 1891 by Sprengel. [1,2] From the 6th week, the scapula undergoes a downward migration to reach its final physiological

In the congenital elevation of the scapula, it is high located.

In parallel, the scapula undergoes a change of its conformation in order to respond to the function of the upper limb. [3,4]

In the congenital elevation of the scapula, it is high located.

A multitude of malformations are associated with this deformity: vertebral especially given the common embryological origin being the para-axial mesoderm, (Klippel-Feil syndrome), costal, clavicular [5,6,7]

Among the extra-osseous anomalies, diastematomyelia, hypoplasia of the cervical muscles, torticollis, pterygium colli, cleft palate and renal abnormalities can be observed.

This is a rare pathology of the child; the epidemiological characteristics of our study are comparable to that of other series. The average age of our patients is 2.58 years; it agrees with the data of the as well as the clear predominance of women and the right side.

The reason for consultation is most often the aesthetic damage and / or a limitation of the active abduction of the shoulder that may cause instability of this joint a few times. [8]

"Cavendish's" classification distinguishes four stages according to the level of the tip of the omoplate with respect to the cervical and dorsal vertebrae.

The classification of Rigaut et Pouliquentakes into consideration the importance of this elevation on standard images and allows a diagnostic and therapeutic classification.

The CT with 3D reconstruction occupies a major place in the preoperative assessment since it allows to specify the seat of the scapula, its deformation in relation to the 3 planes of space, search the omo-vertebral bone and detect other Associated bone malformations allowing to trace a suitable therapeutic strategy. [9]

MRI allows on the one hand the search of the abnormalities extra bone and on the other hand to highlight the fibrous and or cartilaginous contingent of the omo-vertebral bone.

The age of intervention is between three and seven years for aesthetic reasons and to improve the function of the upper limb including abduction.

Woodward's technique involves a disinsertion-reinsertion of the parascapular muscles to lower the scapula while that of Green aims to resect a more or less important part of the medial or superomedial portion of the scapula. [10,11]

Resection of the omo-vertebral bone, if it exists, is a required step in the surgical procedure

Conclusion:-

The congenital elevation of the scapula is a rare condition.

It is an abnormality of siege and scapula shape most often associated with other bone and extraosseous abnormalities The deficit of the abduction and the esthetic prejudice constitute the surgical indication.



Figure1: Clinical image of an 11-year-old girl admitted for asymmetry of both shoulders.



Figure2: Clinical image showing the ascent of the tip of the scapula to the right.



Figure 3: Standardradiograph of face objectifying the elevation of the right scapula compared to that left.



Figure4: 3D bone reconstruction showing the rise of the scapula and presence of the omo-vertebral bone.

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