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HUMEROULNAR SYNOSTOSIS: CASE REPORT

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SUMMARY

This is a report of a case of humeroulnar synostosis at the right elbow of a native Nigerian girl in whose family there is no history of genetic/hereditary diseases. This defect was not associated with any other deformity. This is a rare defect that has never been mentioned in literature. By excluding any causes, this case has been proved to be a failure of differentiation that is one of the major categories in the classification of congenital limb defects by Alfred B. Swanson.

INTRODUCTION

A three-year old girl presented with a stiff right elbow, which was noticed by her mother four days after delivery. This was the only complaint. This defect is rare and by excluding all causes, the diagnosis was established. It was classified as a failure of differentiation, one of the categories in the classification of congenital limb defects by A. B. Swanson. Below are the case history and an explanation for the classification.

CASE REPORT

OC, a three-year old native Nigerian girl was brought by her mother to the outpatient orthopaedic clinic of Usmanu Danfodiyo University Teaching Hospital, Sokoto, Nigeria with the complaint of inability to move the elbow joint, which was noticed four days after delivery. The child was taken to the nearest private clinic, where the mother was advised to move the elbow passively. Lack of improvement compelled the mother to seek a specialist's advice.

OC was the third of four children in the family and the mother was the only wife. When the pregnancy was 20 weeks the mother had typhoid fever and anaemia, which was treated with Amoxicillin capsules and iron supplements respectively. There were no other complaints from the mother until the child was delivered at term. Labour and post-natal periods were not eventful. There was no history of genetic/hereditary diseases in the girl's family.

Physical examination revealed an active child who was not pale and had no jaundice. First and second heart sounds were heard. The lungs were clear. The abdomen was not distended. No organs were enlarged. There were no limitations of movements in the shoulder joints. The right elbow joint was stiff and there was a fixed flexion deformity of 20°. Both triceps muscles had normal bulk and tone. The right biceps muscle was hypoplastic. All the forearm muscles had normal bulk and tone. Full pronation and supination of the right forearm was not possible. Movements at both wrists joints were not impaired. There was no neurological deficit. The only pathology revealed by plain radiography of both upper limbs was right humeroulnar synostosis.

The girl's parents lived in another town far, from the hospital and were anxious to know how she will be managed. They were told she would benefit from excision arthroplasty. The triceps and biceps muscles accomplish extension and flexion of the forearm at the elbow respectively. Extension of the forearm can also be accomplished by gravity if there is any defect localized in the triceps muscle. In the subject of this report all the muscles of the right upper arm were developed. Therefore excision arthroplasty and physiotherapy would create extension and flexion at the elbow joint. The child was booked for surgery. The parents were counselled and advised to encourage the child to continue to use the right hand while waiting for surgery but they did not return the child for surgery.

DISCUSSION

At the elbow the commonest synostosis is proximal radioulnar synostosis(1,2) often associated with other congenital defects. In the subject of this report, the synostosis is humeroulnar and solitary. At the elbow a neglected dislocation of the ulna will ankylose and may subsequently ossify but in such a case the intra articular space will still be visible(3). More so, the nuclei of ossification at the elbow do not complete ossification at that tender age. Therefore, this case cannot be of any clinical entity apart from congenital right humeroulnar synostosis. In the classification of congenital limb defects by A. B. Swanson, this defect falls into the category of failure of differentiation(1).

REFERENCES

1. Swanson, A. B. Congenital limb defects: Classification and treatment New Jersey: CIBA-GEIGY, 1983; 33:3.
2. Beety, J. H., Congenital anomalies of trunk and upper extremity. In Campbell's operative orthopaedics. Canale S. T. Editor. New York: Mosby Inc. 1992; 1:1069-1073.
3. Azar, F. M. and Wright, R. II P. E. Arthroplasty of shoulder and elbow. In: Campbell's operative orthopaedics. Canale S. T. editor. New York: Mosby Inc. 1992; 1:504.
4. Williams, P. L. and Warwick, R. Editors: Gray's Anatomy, 36th edition New York, Churchill Livingstone 1980; 353-377.