

A RARE CASE OF BILATERAL CENTRAL HAND DEFICIENCY WITH (SPLIT) CLUB HAND DEFORMITY ----ECRODACTYLY

Dr. Arun Kumar. S. Bilodi*¹, Dr. Mohamed Sheriff², Dr. K.C.Mathews³, Dr. Faizan Khalid Shah⁴, Dr. T.Vishnu⁵

¹Professor of Anatomy., *Department of Anatomy.*

²Assistant Professor of Orthopaedic Surgery.

³Professor and HOD, Department of Orthopaedics.

⁴Second Year Post Graduate Student of Orthopaedics.

⁵Final Year Post Graduate Student of Orthopaedics.

Department of Orthopaedics Sree Mookambika Institute of Medical Sciences Kulasekaram
Kanyakumari District, South- India.

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*Corresponding Author

Dr. Arun Kumar. S.

Bilodi

Professor of Anatomy.,
Department of Anatomy,
Department of
Orthopaedics Sree
Mookambika Institute of
Medical Sciences
Kulasekaram
Kanyakumari District,
South- India.

ABSTRACT

Here we are reporting a rare case of split hand deformity in both hands that was seen in a elderly male aged 68 years who had complete loss of middle finger bilaterally since birth and cleft palm deformity of left hand associated with syndactyly of ring and little fingers and deep groove in the palmar and dorsal aspect of same hand, while in the left hand there was no syndactyly and deep cleft but there was claw finger deformity of thumb and index finger. There was no other deformity in the forearm and arm. Spine was normal. Lower limbs were normal. Since it was a rare case of deformity, made us interesting to study hence it was reported.

KEYWORDS: Club hand, fissure in the palm, deformity of the thumb, syndactyly, central hand deficiency.

INTRODUCTION

Ecrodactyly is derived from “Ectroma” Greek word means Abortions and “Daktylos” means fingers. Literal meaning of this word is “Abortion of a Finger” (Durowaye et al).^[1] Ecrodactyly involving hands and feet are described as “claw hand”. where thumb or one finger may be included namely little finger, ring finger syndactyly of

two. Similar anomalies may be seen in the foot also (Peterson et al-2001).^[2] It is one of the rare congenital disorder due to disturbed development of hand. It is due to longitudinal arrest-Type-1.^[3]

In the hand central ray is affected. In this conditions there were no proximal deficiencies of vessels, nerves, tendons, muscles. The centre of cleft hand appears as “V-shape deformity” The variations of cleft hand incidence varies from 1 in 90,000 to 1 in 10,000 births depending on classification. The cleft hand may occur as unilaterally or bilaterally. Wedge shaped defect of apical ectodermal of limb bud is the pathophysiology of the cleft hand. So syndactyly, ecdodactyly occur from the same mechanism.^[4] The digits of the borders of cleft hand might be giving appearance of Syndactyly. There may be absence of one or more digits Thumb, ring and little finger are less affected in the most of the affected part of the hand [Upton et al].^[5]

CASE REPORT

An elderly person from Bangalore had this deformity in the both hands. Other than that there was no other deformity.

On General Examination

He was tall, well built and well nourished .with no cyanosis, clubbing, jaundice and lymphadenopathy.

On systemic examination, All his systems were normal.

LOCAL EXAMINATION: Showed.

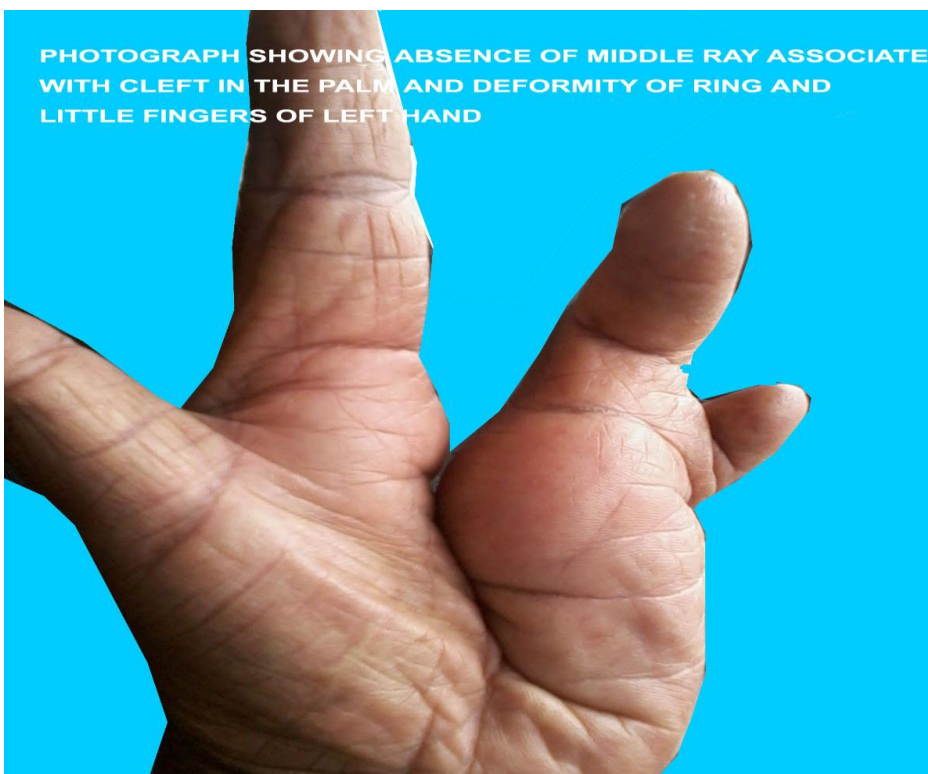
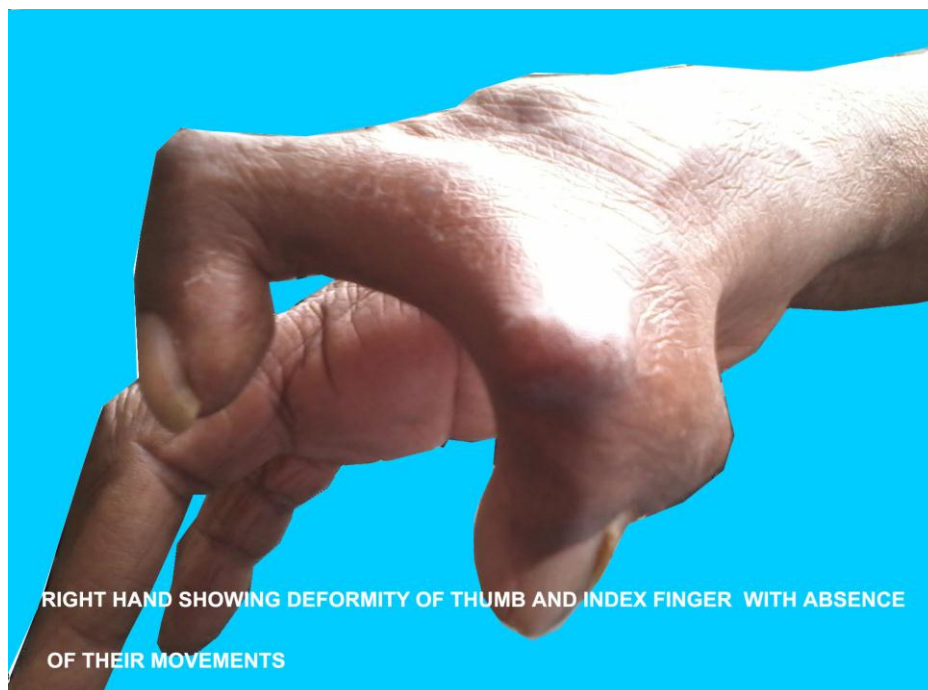
Omit observations. Deformity of Right palm: i)

There was absence of middle finger. Unlike in the palm of cleft hand, there was neither cleft deformity of the palm nor syndactyly of the fingers. The thumb was very broad and it was appearing like a hook. iv) Metacarpals were very broad. v) Knuckles were very prominent

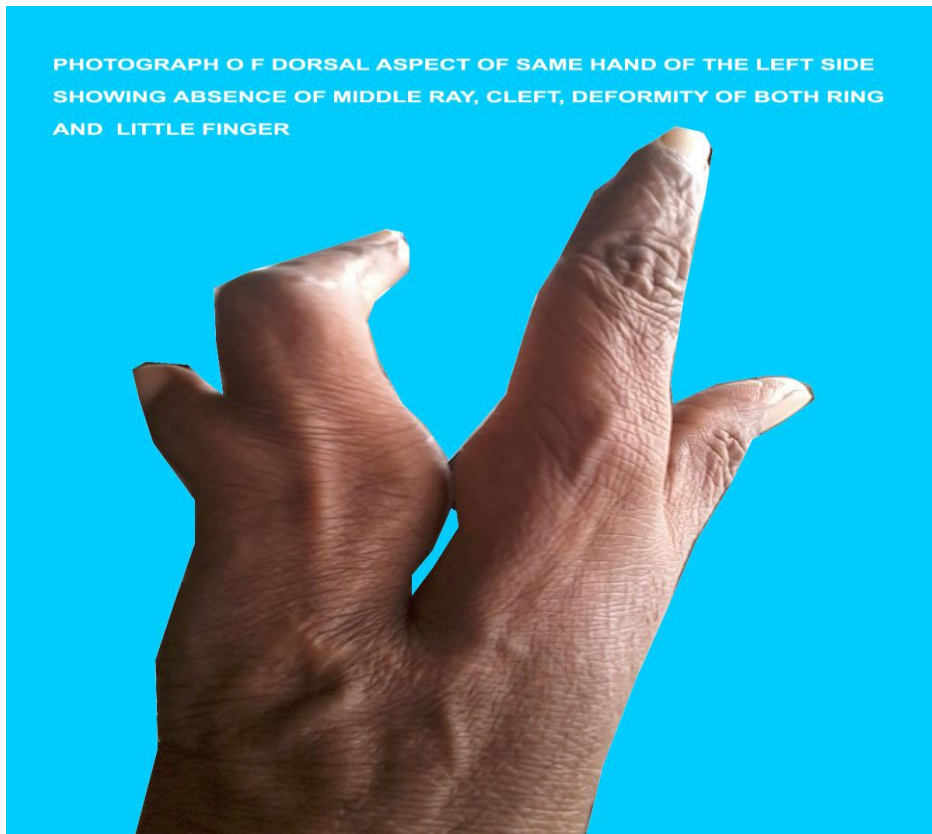
Observations of. omit Deformity of Left palm

There was also absence of middle finger, ii) There was deep cleft well seen both from palmar and dorsal sides of the palm giving rise to two halves of the palm. iii) There was also presence of thumb and index fingers on the left side of the cleft and ring and little fingers on

the right side of the cleft, but no middle finger. IV) There was syndactyly between the ring and little fingers.



PHOTOGRAPH OF DORSAL ASPECT OF SAME HAND OF THE LEFT SIDE
SHOWING ABSENCE OF MIDDLE RAY, CLEFT, DEFORMITY OF BOTH RING
AND LITTLE FINGER



PHOTOGRAPH SHOWING ABSENCE OF MIDDLE RAY ASSOCIATE
WITH CLEFT IN THE PALM AND DEFORMITY OF RING AND
LITTLE FINGERS OF LEFT HAND



DISCUSSION

Various changes occurs to 7q in the case of ecrodactyly, deletion or translocation may occur to 7q, then ecrodactyly may be associated with sensorineural hearing loss This hearing loss occurs only in split hand or split foot Malformation of Type-1(Wieland et al).^[6]

Some noted personalities had ecrodactyly, they were Bee Walker -Popular television anchor, Grady Stiles. Senior, Grady Stiles. Junior, Vodoma tribe in Northern Zimbabwe Mikhail Tal, (Chess world Champion), Lee hee ah, Korean pianist had only two fingers, Cedric Gregoire was guitarist and vocalist had only two fingers.^[7]

Ecrodactyly can also occur not only in human beings but also can occur in toads, mice and dogs.

A study was done in the University of Alberta on wood frogs to study the depth of deformity in the low disturbance areas. During field studies, they examined 22,733 frogs, they only 49 wood frogs had deformity of Ecrodactyly.^[8]

A study was performed by Forest Department and Natural Resources at University of Padua, on approximately two thousand salamanders [687 adults, 1259 larvae] from the wet land complex for the evaluation deformity The study showed 54 adults had the deformity, (7.9%). Among them 46 (85%) showed missing ectrodactyly, polyphalangy [extra], dwarfed digits [brachydactyly], among the 1259 laevae, 102 had deformity, out of them 94[92%] had ecrodactyly, polyphalangy brachydactyly,. It was found larvae did not suffer from high mortality than the adult ones.^[9] David and Berry in 1977 did a study of allele on 265 cats [101 were males, 164 were females] Out of them only one cat showed ecrodactyly which showed that ecrodactyly is a very rare deformity.^[10] Ferreira. MP reported a case of ecrodactyly in a mixed male Terrier dog of two months old.^[11]

PRESENT STUDY

This is a case of CLUB HAND DEFORMITY in the left hand resulted in two halves of the palm associated with absence of middle ray and syndactyly of ring and little fingers. The deep cleft was well seen both from palmar and dorsal aspect of the palm. Thumb and index fingers were present on the left side of the cleft and ring and little fingers were present on the right side of the cleft while in the right hand, complete absence of movements of fingers along with absence of middle ray, broad hook like thumb, broad metacarpals and

prominent knuckles were observed. Since this deformity of club hand is rare congenital anomaly of hand, hence this study has been done.

TAKE HOME MESSAGE

This is rare congenital anomaly of hand with deformity of hand. Any family history of consanguineous marriage or drug intake during first trimester, then proper advice has to be given to the couples to prevent further occurrence incidences any types of anomalies.

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