

CASE REPORT

ISOLATED WASSEL TYPE II PREAXIAL POLYDACTYLY

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ABSTRACT

Background: Although polydactyly is not uncommon, Type II preaxial form is relatively rare in our environment, especially in isolated form.

Method/Result: The case of a 6 month old infant with Type II preaxial polydactyly is hereby presented with literature review.

Conclusion: Sporadic isolated preaxial polydactyly can seldom be seen in our environment.

Keywords: Isolated; preaxial; polydactyly

Introduction

Polydactyly is a congenital physical anomaly consisting of supernumerary fingers or toes. The extra digit is usually a small piece of soft tissue. Occasionally, it may contain bone without joints, rarely it may be a complete functioning digit.¹ The extra digit is most common on the ulnar (little finger) side of the hand-post axial ray, less common on the radial (thumb) side-preaxial ray, and very rarely within the middle three digits -middle ray. Polydactyly of the thumb occurs in many forms, ranging from varying degrees of splitting to completely duplicated thumb. Occasionally it consists of only fleshy nubbins on the radial border.²

Wassel has classified polydactyly of the thumb into Types I-IV.² Type IV is the most common with duplication of the proximal phalanx which rests on a broad metacarpal.² Polydactyly can occur in isolation or more commonly as one feature of a syndrome of congenital anomalies.¹ These syndromes include Holt-Oram syndrome, Down's syndrome, Fanconi Polycythemia, Meckel syndrome, Lawrence Moon Biedl syndrome, Patau's syndrome and klippel-Trenaunay syndrome. There may also be associated cleft palate, hearing difficulties, renal anomalies, other limb and vertebral anomalies.³ This report presents a 6 month old infant with isolated preaxial polydactyl of Wassel Type II variety.

Case Report

A. K. is a 6 month old female who was noticed with a broad distal aspect of the left thumb with widened nail at birth. Pregnancy was uneventful. The mother admitted to taking only the medication

prescribed during the antenatal visits at Jos University Teaching Hospital. She was delivered via SVD at term with no complications. Milestones were duly attained to date. No other physical anomalies were seen.

She is the 3rd of 3 children in a monogamous setting. Neither of the parents smoked cigarette nor drank alcohol. There was no history of similar occurrence in the other siblings.

The cardiovascular, gastrointestinal and urogenital systems were essentially normal clinically. There was normal response to sound stimuli and object following. Abdominal ultrasonography was normal. Plain radiography of the hand revealed duplication of the distal phalanx of the left thumb. She was reviewed by the plastic surgery unit and worked up for surgery.

Discussion

Polydactyly is perhaps the most common congenital hand anomaly.⁴ Incidence in blacks is about 1 in 300 and in whites is about 1 in 3000.⁵ While duplication in the post axial ray is more common in blacks, duplication in the preaxial ray is more common in whites and orientals.⁵ Preaxial polydactyly is more common in male neonates.⁶ It is more likely that the patient with radial side polydactyly will have it as a part of a syndrome than an isolated malformation.⁷

In the case presented above, the patient is a female of Nigerian parents with no family history of such malformation. That no other congenital anomalies or syndrome were discovered clinically and on imaging indicating the isolated nature of this case also makes it interesting.

The great majority of infants with extra fingers which are mostly fleshy nubbins on the small finger have the extra digits tied off while they are in the newborn nursery by nurses.⁵ This could not be done in the case above after she was noticed with a broad distal left thumb and nail. Radiological evaluation was later done to show the duplicate distal phalanx.

Type II polydactyly of the thumb is relatively less common compared to the other types, Type IV being the commonest. With the low incidence of preaxial polydactyly in blacks already mentioned, the type can be said to be rare in our environment. Sporadic occurrences like the case presented do however occur.

Surgery (Ray excision and closure) was well tolerated with no post op complications.

In conclusion, isolated preaxial polydactyly can seldom be seen in our environment.

References

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X-ray
Lateral View showing duplicate distal phalanx of the thumb.



Frontal View