

Cross-sectional study of epidemiology of congenital anomaly of the hand in a tertiary care centre in India over 1 year

Sir,

Congenital hand anomalies, although rare, incur significantly physical and psychological trauma. Timely diagnosis and appropriate treatment can change the future of the child. Therefore, it is essential for treating doctor to refer these children to appropriate specialists.

The aim of this study is to know the epidemiology of such anomalies at our centre over a 1-year period, i.e. to know the most common diagnosis, risk factors and associated anomalies.

This study includes patients of congenital hand anomalies who had come to our OPD in the last 1 year, i.e. from 1st September 2015 to 31st August 2016. A total of 80 patients were seen, of those, 59 were new and 21 had come for follow-up. Forty-two were female patients and 38 were males. Mean age of the patients was 33.8 months, with eldest being 13 years and youngest being 10 days. Sixty-six patients were Hindus, 13 Muslims and 1 Christian. Four patients were born out of consanguinous marriage (4th degree).

Mean age of mothers at the time of birth was 24.7 years. Forty-eight children were the first issue of their parents, 26 were the second issue, 5 were the third issue and 1 was the fourth issue. One pair of twins was noted. Higher incidence of anomalies in primipara was also noted in the study by Ghorpade *et al.*^[1] Forty-three children were born as full-term vaginal delivery, while rest had delivered by caesarean section. In the study by Ghorpade *et al.*, rate of caesarean delivery was 44% which in India is just 8.5%.^[1,2] Thirty-four patients had birth weight \leq 2.5 kg.

Ratio of bilateral hand involvement to right to left side is 5:1.6:1. Among all congenital anomalies, syndactyly

was most common (31 cases). Next common was radial club hand [Table 1]. This is in contrast to studies done in the United States in a mid-Western Centre and at Ludhiana (India) where polydactyly is the most common, followed by syndactyly [Figures 1 and 2].^[1,3]

The most common associated anomalies in our series included Apert syndrome, Poland syndrome and isolated cleft palate. All associated anomalies are listed in Table 2. Vasluian *et al.* in their study done in Northern Netherland showed Patau syndrome to be the most common chromosomal anomaly while arthrogryposis was common among single gene anomalies. Cardiovascular system was most commonly affected.^[4]

Forty-eight patients were operated among eighty patients in the last 1 year. The limitation of our study includes small sample size; therefore, the results may not

Table 1: Type of congenital hand anomaly

Type of anomaly	Number of patients
Syndactyly	31
RCH	18
Transverse arrest	6
Constriction ring syndrome	6
Camptodactyly	6
Polydactyly/duplication	6
Cleft hand	4
Windblown hand	1
Brachydactyly	1
Lymphangioma	1
Macroductyly	1
Radioulnar synostosis	1

RCH: Radial club hand

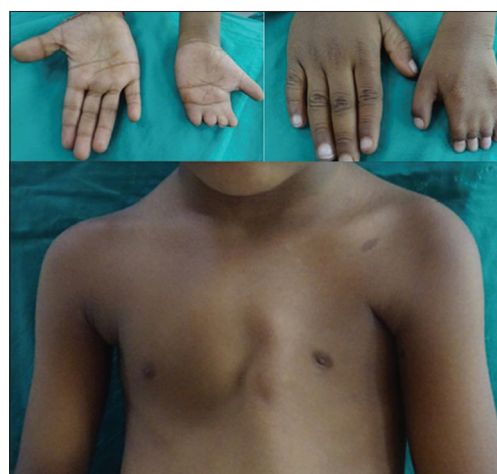


Figure 1: Case of Poland syndrome with left symbrachydactyly

Table 2: Type of associated anomaly

Type of associated anomaly	Type of hand anomaly	Number of patients
Apert syndrome	Apert hand (rose bud and mitten type)	6
Poland syndrome	U/L symbrachydactyly	3
Pierre Robin sequence	U/L brachydactyly, camptodactyly	2
Isolated cleft palate	Camptodactyly, syndactyly, RCH	4
Cleft lip and palate	B/L RCH, cleft hand	2
CTEV	Camptodactyly, windblown hand	3
Congenital heart disease	RCH, camptodactyly	4
Microtia	B/L transverse arrest with right humeroulnar synostosis	1
Torticollis	Right RCH	1
Congenital diaphragmatic hernia	Right RCH	1
Inguinal hernia	Windblown hand	1
Hypospadias	B/L symbrachydactyly	1
VACTERL anomaly	B/L RCH	1
Meningomyelocele	RCH	1

CTEV: Congenital talipes equinovarus, U/L: Unilateral, B/L: Bilateral, RCH: Radial club hand



Figure 2: Case of bilateral radial club hand

be applicable to large population. This study however is still an interesting cross-sectional data of consecutive cases over a 1-year period.

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Conflicts of interest

There are no conflicts of interest.

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