

## Toe Polydactyly in Nigerian Boy

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### Abstract

From Biblical days, the occurrence of six toes instead of five, called polydactyly, has been known. Of late, there have been some individual case reports from USA and Italy. Moreover, a group formed from several countries has dealt competently with genetic studies of 19 preaxial polydactyly families. Therefore, we report a case from Nigeria.

**Keywords:** Polydactyly; Cosmesis; Congenital deformity; Hand/foot malformations

### Introduction

Polydactyly, as the name implies, is a congenital deformity of the digit. Its ancient recognition appeared in Biblical times wherein a giant was described as having six toes bilaterally! [1,2]. Recent single case reports are recorded from USA, [3] and Italy [4]. Now, it is on record that a histopathology data pool provides opportunities for epidemiological analysis [5]. Therefore, we propose to describe a case of polydactyly which was found in such a pool.

### Method

From 1970 to 2000, the senior author (WO) was in charge of a Reference Pathology Laboratory situated in Enugu, erstwhile Capital City of the Government of the Eastern Region of Nigeria. Elsewhere, [6] 36 papers on the Ibos or Igbos, [7] who constitute a major Ethnic Group in this developing country, were presented. Here, case report with a pediatric surgeon (GU) is presented.

### Case Report

NO, a 4-year-old boy presented at the University of Nigeria Teaching Hospital, Enugu, to one of us (GU), with the mother's story of having been born with 6 right foot digits. It was excised and sent to the senior author (WO) for assessment. On inspection, there were 6 digits on the right foot. Surgical removal for cosmesis was done (See Figure 1). The extra toe itself measured  $0.4 \times 1.0 \times 1.2$  cm while the nail measured  $0.4 \times 0.3$  cm. The microscopical appearances were normal. The patient recovered uneventfully.

### Discussion

Polydactyly is a congenital anomaly with a wide range of manifestations. As an Italian report showed, a Tibetan woman aged 19 years presented with isolated left hand preaxial polydactyly [4]. In the United States report, [3] a 39-year-old man presented with acne. It was only during routine physical examination that the congenital anomaly was discovered. There were six digits in both hands and feet. Light has been thrown on its genetic basis by a group of 13 authors! [8]. It suffices here to cite part of their Abstract thus: "Polydactyly is the most

frequently observed congenital hand malformation with a prevalence between 5 and 19 per 10 000 live births. It can occur as an isolated disorder, in association with other hand/foot malformations, or as a part of a syndrome, and is usually inherited as an autosomal dominant trait."

Incidentally, the state of development of the community is not such as to be able to trace any genetic elements. All that is available is the absence of any known such case in the family. The boy has since been lost to follow-up as usually happens in this community. In contrast, workers among the multiethnic 'Negev' population of Southern Israel took pains to analyze 189 polydactyly patients, concluding that "the pathologies in embryogenesis leading to preaxial and postaxial polydactyly vary, with the former occurring sporadically compared with the latter, which predominates in consanguineous families and syndromes" [9].



**Figure 1:** Right and left toes showing both polydactyly and normal appearances.

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