



PROFILE OF CONGENITAL LIMB ANOMALIES IN CALABAR

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¹Ngim E. Ngim, ¹Ikpeme A. Ikpeme, ¹Anthony M. Udosen, ²Enembe Okokon, ²Joy Iya. ¹ Department of Orthopaedics and Traumatology, ² Department of Community Medicine, University of Calabar Teaching Hospital, Calabar.

ABSTRACT

CORRESPONDENCE :

Dr. N. E. Ngim
Department of
Orthopaedics and
Traumatology
University of Calabar
Teaching Hospital
Calabar
E-mail:
nngimic@yahoo.com
Tel: +2347028915067

Objective: To describe the profile of congenital limb abnormalities in Calabar.

Methodology: A retrospective descriptive study of all patients presenting to the orthopaedic department of our hospital over a three year period. Patient information was retrieved from case notes and theatre records. Information obtained included the patients' socio-demographics, type of limb anomaly, limb affected, associated non-musculoskeletal congenital anomalies, type and duration of treatment given and follow up.

Data obtained was analysed using Statistical Package for Social Sciences (SPSS) version 17.0 and results were presented as frequency tables and means.

Results: Seventy two patients presented in our unit with congenital limb anomalies over the study period, age ranged from 1 day to 21 years (mean age 15 months). There were 43 males and 29 females, with male to female ratio of 1.48:1. Most of the anomalies (95.83%) affected the lower limbs, with the bilateral lesions occurring in 45.83% of patients. Two patients had multiple limb anomalies affecting upper and lower limbs. The most common limb anomaly was clubfoot constituting 65.28% while congenital genu recurvatum, polydactyly and syndactyly each constituted 6.94% of the cases. Three patients (4.17%) had associated non-musculoskeletal congenital anomalies – ventricular septal defect, myelomeningocele and congenital inguinal hernia constituting one each.

Most of the patients (75.41%) were treated non-operatively. Majority of the patients (52.78%) defaulted at various stages of treatment.

Conclusion: Congenital clubfoot is the commonest congenital limb anomaly in our centre. Associated non-musculoskeletal anomalies are uncommon. Patient default at various stages of treatment is a major issue.

Key words: Congenital, limb anomalies, Calabar

“Congenital limb anomalies can have far reaching effects on the quality of life of the patient as well as social and family relationships. Congenital clubfoot is the commonest congenital limb anomaly in our centre. Associated non-musculoskeletal anomalies are uncommon”

INTRODUCTION

Congenital limb anomalies are commonly encountered in the practice of orthopaedics. The upper and lower limbs are affected to varying degrees and multiple anomalies in the same patient are not rare^{1,2}. There may be associated non-musculoskeletal congenital anomalies such as Ventricular Septal Defect (VSD), Atrial Septal Defect (ASD) and imperforate anus. The aetiology of these conditions is not well established but genetic anomalies, drug ingestion and certain maternal diseases during the first trimester of pregnancy are often implicated^{3,4}.

Congenital limb anomalies can have far-reaching effects on the quality of life of the patient as well as on social and family relationships. Often productivity of the patient is seriously impaired, if not treated, and in some cases the patient is completely dependent on others for activities of daily living^{5,6}.

Due to the variations in the distribution of congenital limb anomalies among different population groups⁷ and lack of such a description in our catchment area, the authors decided to investigate the profile of this condition in our environment. This will stimulate further studies in this regard with a view to proposing measures to reduce the occurrence of these congenital limb anomalies in our society. Proper and more specific allocation of scarce resources for training of manpower and procurement of equipment for prenatal diagnosis and effective treatment of the types of congenital limb anomalies prevalent in our society are critical.

PATIENTS AND METHODS

This was a retrospective descriptive study of patients who presented with congenital limb anomalies in our centre over a three year period. The medical information of patients were retrieved from clinic records, case notes and operation register. The information obtained included socio-

-demographics, type of congenital limb anomaly, side of the lesion, associated non-limb congenital anomalies, method of treatment, duration of treatment, outcome of treatment, indication and type of surgery if done and follow up.

The data obtained was analysed using Statistical Package for Social Sciences (SPSS) version 17.0 computer software. Results are presented as means and frequency tables.

RESULTS

Seventy two patients presented in our unit with congenital limb anomalies over the study period, age ranged from 1 day to 21 years (mean age 15 months). There were 43 males and 29 females, with male to female ratio of 1.48:1. Most of the anomalies (95.83%) affected the lower limbs, with the bilateral lesions occurring in 45.83% of patients. (See Figure 1).



Figure 1: Bilateral absent tibia

Only three patients (4.17%) had lesions affecting the upper limbs. Two patients had multiple limb anomalies affecting upper and lower limbs. The most common limb anomaly was clubfoot constituting 65.28% while congenital genu recurvatum, polydactyly and syndactyly each constituted 6.94% of the cases (See Table I).

TABLE 1: Types of Congenital Anomalies

Type of anomaly	Number	(%)
Absent fibula	2	2.78
Absent Radius	1	1.39
Equinus deformity	2	2.78
Flexion contracture of the knee	1	1.39
Genu recurvatum	5	6.94
Macrodactyly	1	1.39
Polydactyly	5	6.94
Syndactyly	5	6.94
Talipes calcaneovalgus	3	4.17
Talipes equinovarus	47	65.28
TOTAL	72	100

Three patients (4.17%) had associated non-musculoskeletal congenital anomalies – ventricular septal defect, myelomeningocele and congenital inguinal hernia constituting one each.

Most of the patients (75.41%) were treated non-operatively. The mean duration of treatment was 10 weeks (maximum of 52 weeks). Patients were followed up for an average of 3 weeks, with maximum of 72 weeks. Majority of the patients (52.78%) defaulted at various stages of treatment.

DISCUSSIONS

Congenital limb anomalies are common in orthopaedic practice. The type and complexity of lesions presenting for treatment depends on the locality and prevailing genetic factors.^{2,8} Congenital limb anomalies are generally more common in males^{8,9} as found in our study even though there are specific conditions with much higher incidence in females such as development dysplasia of the hip¹⁰. Interestingly, no developmental dysplasia of the hip was seen in our series.

Even though congenital limb anomalies can affect the upper and/or lower limbs, in our study the lower limbs were affected more commonly than the upper limbs, with a high proportion of bilateral affectation (45.83%). However, the reason for this observation cannot be readily identified. More research is needed

to further elucidate the factors responsible for this occurrence.

The commonest congenital anomaly found was clubfoot which occurred in 65.28% of the patients in our series higher than 52.8% seen in another study in Ibadan¹¹. It is important to note the absence of developmental dysplasia in our series as against the finding that it constituted 2.2% of cases in the Ibadan study.

Treatment was largely non-operative and most of the patients (52.78%) defaulted at various stages of treatment and follow up to probably seek alternative treatment at the traditional bone setters' – a common challenge of orthopaedic care in our society!^{12,13}

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