

## Facial Nerve Paralysis in Imo State, Nigeria

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**Abstract:** A retrospective study of facial nerve paralysis in two tertiary health institutions in Imo State, Nigeria over a five-year period is presented. The aim was to address the aetiology and prevalence of facial nerve paralysis. There was a total of 56 cases made up of 36(64.29%) males and 20 (35.71%) females with a male: female ratio of 1.8:1. The ages ranged from 6 to 68years with a peak prevalence occurring in the age group of 21 – 30 years. Left facial nerve was affected in 60.71% of the cases while the right was involved in 39.29%. The commonest cause was Bell's palsy 20(35.71%) while Road Traffic Accident was responsible for 14 (25.00%). The outcome of the study would be of predictive value in assessment and management of future cases.

**Key words:** Facial paralysis, prevalence, aetiology

### INTRODUCTION

Facial nerve paralysis is both cosmetically distressing and functionally disabling. It can result from trauma, neoplasm, infection/inflammation, idiopathic or congenital causes. The predominant causes appear to vary from one location to another. Facial paralysis can be unilateral or bilateral and could be central or peripheral. Onset could be sudden or insidious. The most common causes of abrupt onset of unilateral facial weakness are stroke and Bell's palsy. It can affect persons of any age, the median age of onset being 40 years (Katusic *et al.*, 1986). The incidence is lowest in children under 10 years old; increases from the ages of 10 to 29, remains stable at the ages of 30 to 69, and is highest in people over the age of 70 (Peiterson, 1982).

This is a retrospective study of patients seen in the otolaryngology Departments of two tertiary health institutions in Imo State, Nigeria over a five-year period. The study was aimed to address the aetiology and prevalence of facial paralysis in the sub-region. The outcome would be of predictive value in assessment and management of future cases.

### METHODS

The case notes of patients seen in the Otolaryngology Departments of Federal Medical Centre, Owerri and Imo State University Teaching Hospital, Orlu, both in Imo State, South-East Nigeria from 2002 to 2007 were examined. The information extracted were the biodata, the causes of facial paralysis, onset, laterality, management offered among others. The data obtained were analyzed using SPSS version II software and results were presented using simple frequency and percentages.

### RESULTS

There was a total of 56 cases seen made up of 36(64.29%) males and 20 (35.71%) females with a male: female ratio of 1.8:1. The age range was from 6 to 68years. Table 1 shows the age group and sex distribution of the patients. The highest incidence or peak prevalence of facial paralysis occurred in the age-group 21-30years followed by age-groups 11 – 20 and 31 – 40 respectively. The left side of the face was involved more frequently 34(60.71%) than the right 22(39.29%) as shown in Table 2. There was no bilateral facial paralysis. The commonest cause of facial paralysis in our series was Bell's palsy 20(35.71). This was followed by trauma, namely; road traffic accident (RTA) 14(25.00%) and surgical trauma (parotidectomy) 2(3.57%). Other aetiologies of facial paralysis in this series were as shown in Table 3.

Table 1: Age-Group and Sex Distribution of Patients

Age-Group (Years)	Sex		Percentage Total (%)
	Male	Female	
	n (%)	n (%)	
0-10	3 (5.36)	1 (1.78)	4 (7.14)
11-20	9 (16.07)	5 (8.93)	14 (25.00)
21-30	11 (22.64)	5 (8.93)	16 (28.59)
31-40	5 (8.93)	7 (12.51)	12 (21.44)
41-50	3 (5.36)	1 (1.78)	4 (7.14)
51-60	3 (5.36)	1 (1.78)	4 (7.14)
61-70	2 (3.57)	0 (0.00)	2 (3.57)
Totals	36 (64.29)	20 (35.71)	56 (100.00)

Table 2: Laterality of Facial Paralysis

Face Side	Number	Percentage (%)
Left	34	60.71
Right	22	39.29
Totals	56	100.00

Table 3: Aetiologies of Facial Paralysis

Aetiology	Number	Percentage
Bell's Palsy	20	35.71
Trauma – RTA	14	25.00
– Parotidectomy	2	3.57
Ramsey Hunts Syndrome	6	10.71
CSOM	5	8.94
Ca Parotid	2	3.57
Childhood convulsion	2	3.57
Malignant otitis externa	2	3.57
CVA due to hypertension	2	3.57
Meningitis	1	1.79
Total		100.00

## DISCUSSION

The study showed that the prevalence of facial paralysis in our sub-region is relatively low. The peak prevalence occurred in the age-group 21 – 30 years. This correlated with the findings at Ife, Nigeria (Amusa *et al.*, 2006). Bell's palsy ranked the highest cause of facial paralysis as was indicated in other studies (El-Ebiary, 1971; Hauser *et al.*, 1971; Adour *et al.*, 1978; Napoli and Panagos, 2005; Gudrun *et al.*, 1999). Trauma especially road traffic accident (RTA) constituted a major cause of facial paralysis in our series. This is often over-looked in such cases as immediate attention was normally given to other obvious injuries that may or may not cause the victim's life. This was the case with our patients. However, facial paralysis in a multiple trauma setting is uncommon, but such a case has been reported (Hung, 1998). Parotid malignancy was among the aetiologies of facial paralysis in our series but on rare occasions. Facial paralysis associated with a parotid tumour need not denote malignancy. Two cases in which contrary to appropriate conventional wisdom, facial paralysis resulted from benign mixed tumours have been reported (Blevins *et al.*, 1992). In the said cases, facial paralysis was the sole sign of recurrent disease. Also acute facial paralysis has been reported as the initial presentation of primary squamous cell carcinoma of the parotid gland (Alam *et al.*, 2007). Malignant otitis externa was responsible for 3.57% of the cases of facial paralysis. Although facial nerve involvement is a sign of progression of malignant otitis externa, it does not by itself worsen prognosis (Soudry *et al.*, 2007). Though there was no bilateral facial paralysis in the study, it does occur both from congenital (Fogg, 1980) and acquired (Haydar *et al.*, 2003; McIntosh *et al.*, 1987; Goerge and Pahor, 1991) causes, often in a subtle manner leading to diagnostic dilemma (Haydar *et al.*, 2003). Trauma, malignancies, and seizures have been reported as aetiology of bilateral facial paralysis (Amusa *et al.*, 2006).

All our patients were managed conservatively and all had physiotherapy. No decompression of the facial nerve was done. Full recovery occurred in 85% of the cases while 10% had partial recovery and in 5% there was unsatisfactory outcome.

Peripheral facial paralysis is a diagnostic challenge (Schaitkir and May, 1993). Every effort must be made to determine the aetiology, because Bell's Palsy is a

diagnosis of exclusion. We lean heavily on careful history and physical examination to narrow the possibilities as the facilities for special tests are lacking in our environment.

## CONCLUSION

Facial paralysis though not very common occurs in our sub-region especially among the young age-groups. Concerted effort must be made to establish the diagnosis and institute the right management to enhance favourable outcome. Since RTA constituted a reasonable cause in the series, it must be looked for in our accident victims.

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