



Clinical Study of Facial Nerve Palsy

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Abstract

Background- The facial nerve is the nerve of the second branchial arch. It serves several functions – motor and sensory.

Methods- Total 100 patients with facial nerve palsy of all age and sexes who came to department of E.N.T. were included in our study. Detailed history was taken of all the patients. Complete E.N.T. and head & neck examination was done. Facial nerve palsy was graded according to the House and Brackmann classification.

Results- In our study, the youngest patient was of 12 years old while maximum age was 59 years accordingly we categorised different age groups. Patients were graded according to the House and Brackmann classification. We found that most of the patients were having grade V (40%) at presentation followed by grade IV (30%) and 22% were having grade III.

Conclusion- Male preponderance was noted. Facial paralysis can produce significant impact on the patient psychologically, professionally as well as socially and in daily life, and should be treated in a timely manner.

Keywords- Facial, Paralysis, House and Brackmann classification.

Introduction

The facial nerve is the nerve of the second branchial arch. It serves several functions – motor and sensory. It supplies the striated musculature of the face, neck, and stapedius

muscle of the middle ear, parasympathetic fibres to the lacrimal, submandibular & sublingual glands and seromucinous glands of the nasal cavity. It conveys taste sensations from the anterior two-thirds of the tongue. It also has a small cutaneous sensory component¹.

The internal auditory segment is 7 to 8 mm in length². The first part of the facial canal – the labyrinthine segment of the nerve (3–5 mm) is the narrowest part of the facial canal and extends from the fundus of internal auditory canal to the geniculate ganglion. When the nerve reaches a point just lateral and superior to the cochlea, it angles sharply forward, nearly at right angles to the long axis of the petrous temporal bone, to reach the geniculate ganglion. At this level, the direction of the nerve reverses itself, executing a hairpin bend so that it runs posteriorly. This is the ‘first turn’ of the facial nerve. The greater superficial petrosal nerve arises from the geniculate ganglion. The second part or the tympanic segment (10–12 mm) extends from the geniculate ganglion to the second turn of the facial nerve. It passes posteriorly and laterally along the medial wall of the tympanic cavity, perpendicular to the long axis of the petrous bone. Here it lies above the oval window and below the bulge of the lateral semicircular canal. The third part or the mastoid segment (13–15 mm) extends from the second genu to the stylomastoid foramen. Here the nerve assumes a vertical position, dropping downwards in the posterior wall of the

tympenic cavity to exit at the base of the skull from the stylomastoid foramen. The nerve to stapedius muscle is a small twig given off from the facial nerve as it descends in the posterior wall of the tympenic cavity behind the pyramidal eminence. The chorda tympani branch originates about 5 mm above the stylomastoid foramen. It exits the mastoid cavity via the stylomastoid foramen and enters the parotid gland².

Materials and Method

Total 100 patients with facial nerve palsy of all age and sexes who came to department of E.N.T. were included in our study. Detailed history was taken of all the patients. Complete E.N.T. and head & neck examination was done. Facial nerve palsy was graded according to the House and Brackmann classification. Appropriate investigations were done according to the aetiology.

Results

In our study, the youngest patient was of 12 years old while maximum age was 59 years accordingly we categorised different age groups.

Table 1: Distribution of patients according age

Age group	No. of patients	Percentage
11-20 Yrs	5	10
21-30 Yrs	8	16.00
31-40 Yrs	20	40.0
41-50 Yrs	12	24.00
More than 50	5	10.00
Total	50	100.00

In our study, the youngest patient was of 12 years old while maximum age was 62 years accordingly we categorised different age groups.

Table 2: Distribution of patients according sex

sex	No. of patients	Percentage
Male	29	58.00
Female	21	42.00
Total	50	100.0

Out of 50 cases 58.00% were male and 42.00% were female.

Table 3: Relation of grades of facial palsy on presentation

House Brackmann Grade	No. of patients	Percentage
Grade I	0	0.00
Grade II	0	0.00
Grade III	11	22.0
Grade IV	15	30.00
Grade V	20	40.00
Grade V	4	8.00
Total	50	100.00

Patients were graded according to the House and Brackmann classification. We found that most of the patients were having grade V (40%) at presentation followed by grade IV (30%) and 22% were having grade III.

Discussion

Facial nerve, originates from the pons, runs a long intratemporal course and exits through stylomastoid foramen to supply different muscles of facial expression.³ This long intra-osseous part of the nerve makes it vulnerable to different types of injuries ranging from local oedema to entrapment of the nerve in the bony canal or even impingement of the nerve by bony spicule after fracture of temporal bone. Treatment of facial palsy depends upon cause, duration, degree of facial palsy. Patients were treated medically and/or surgically. Medical treatment includes Prednisolone 1mg/kg/day and antiviral drugs.⁴

The recovery is better if patients present early. Higher grade of the facial palsy had direct impact on outcome as well as longer time of recovery as compared to the patients having lower grades at presentation. The maximum age of incidence was in 31- 40 years (39%)

with a male preponderance. While the study done by Hanaa Moala, Sharfi Ahmed, and Yousif M. Yousif also revealed most patients belonging to 31- 40 years (22.8%) followed by 21-30 years (20.4%).⁵

Conclusion

Male preponderance was noted. Facial paralysis can produce significant impact on the patient psychologically, professionally as well as socially and in daily life, and should be treated in a timely manner.

References

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