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ASSESSING CLINICAL OUTCOMES OF CASES OF BELL'S PALSY IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Objective: To assess the clinical outcomes of Bell's palsy in patients presenting to a tertiary care hospital

Methodology: The descriptive study was conducted at the Department of Neurology, Lady Reading Hospital from 1st June 2017 to 31st July 2018 on 113 patients using non-probability purposive sampling. Patients, received at the deaprtment of neurology or referred from the department of maxillofacial surgery and neurosurgery, between 16 and 80 years of age with idiopathic unilateral facial weakness were included in the study, after taking informed consent and approval from the ethical committee. The patient data regarding the demographic details, clinical features, risk factors, and follow-up outcomes were entered into a pre-designed proforma. The data was analyzed using SPSS version 20.

Results: Out of 156 patients who presented with bell's palsy, 113 fulfilled the inclusion and exclusion criteria. Majority were females (n=58, 51.32%) and had laterality on the right side (n= 64, 56.63%). High incidence was noted in patients in the age range 16-29 years (n=51, 45.13 %). The commonest risk factor was hypertension (n=9, 7.96%).

Conclusion: The common risk factors of Bell's palsy in our setup are hypertension, diabetes, and pregnancy in chronological order. There is strong evidence of benefits from the early use of corticosteroids.

Keywords: Bell's Palsy; Clinical Outcome; Risk Factor.

INTRODUCTION

Bell's palsy is the dysfunction of the facial nerve, which is one of the twelve cranial nerves. Its main function is to control the muscles of facial expression.[1] It is the commonest neurological disorder of the cranial nerves but the exact cause is still not determined. Bell's palsy presents as an acute, unilateral, partial, or complete facial paralysis (over 48 hr period). The annual incidence is about 15 to 30 cases per 100,000.[2,3] Bell's palsy accounts for about 80% of facial paralysis.[4] Early steroid therapy is the standard therapy to reduce morbidity although the literature offers little support for the use of antiviral agents. There is no consensus on having any benefit from surgical decompression of facial nerve.[5,6] Pregnancy, diabetes mellitus, elderly patients and hypothyroidism have a high incidence of bell's palsy.[3,7,8]

Due to dearth of literature on reporting the cases of Bell's palsy in our setup, this study was aimed to assess the clinical outcome and possible epidemiological patterns of Bell's palsy in Lady Reading Hospital Peshawar.

METHODOLOGY

The descriptive study was conducted at the Department of Neurology, Lady Reading Hospital from 1st June 2017 to 31st July 2018 on 113 patients using non-probability purposive sampling. Patients between 16 and 80 years of age with idiopathic unilateral facial weakness were included in the study, after taking informed consent and approval from the ethical committee.

Facial weakness due to stroke, otitis media, traumatic causes, herpes zoster infection, and identifiable causes of parotid or ear diseases were excluded.

After fulfilling the inclusion and exclusion criteria, informed consent was taken from the patients. Ethical approval was obtained from the Ethical Committee, Lady Reading Hospital, Peshawar. A pre-designed proforma was used for data collection of the patients which included the patient demographic details, clinical features, investigations, and follow-up outcomes after three months were recorded.

The whole data was entered into SPSS version 20. Statistics analysis was done. Mean, mode, standard deviation, percentage, and frequencies were calculated for numerical variables.

RESULTS

A total of 156 patients with facial weakness were assessed. Out of these, 43 patients were excluded. Among these 43, 26 had a stroke; 4 were from herpes zoster infection; 6 were having trauma-related facial weakness; 6 had confirmed ear or parotid gland pathology, and one patient was diagnosed with idiopathic intracranial hypertension.

The majority were females (n=58, 51.32%) while 55 patients were male with a ratio of 1.05:1. A total of 64 (56.63%) patients had a right-side facial weakness. There is no significant difference between males and females regarding the side of facial weakness. Recurrence was noted in 3% of the patients.

As shown in figure 1, a high incidence of bell's palsy was noted in the age range 16-29 years and the lowest incidence among 40 to 59 years of age. The elderly age group is resurgent.

In our study, the common risk factor for bell's palsy was hypertension 9 (7.96%), followed by diabetes (n=7, 6.19%) and pregnancy (n=2, 1.76%). The patients with diabetes and bell's palsy were in the age range of 50 to 80. Out of seven diabetics, two had uncontrolled diabetes with HbA1c of 11% or more.

Almost 73% of the patients started steroids within 3 days of symptoms onset. Out of the, 5% were started on sub-therapeutic dosage. The delay in initiating steroids therapy was due to a lack of seeking medical care from an authorized physician.

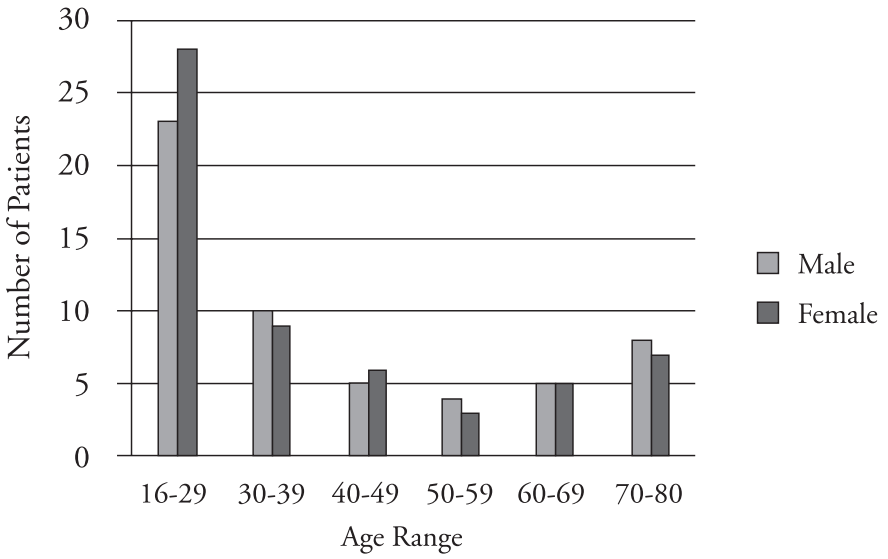

Figure 1: Frequency of Bell's Palsy according to gender and age

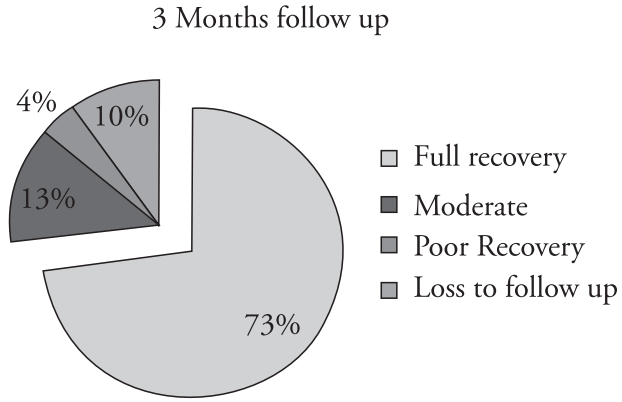

Figure 2: Follow up of patients with Bell's palsy (3 months)

There was a 7% drop out in follow-up in 3 weeks. Almost 83% of these patients showed signs of recovery in three weeks, while at 3 months follow up, a further 10% dropped out was recorded, almost 73% had a complete recovery. The details are shown in Figure 2.

DISCUSSION

Our study showed a slight preponderance of young females with bell's palsy which does correlate with the previous studies.[1, 2] 62% of our patients are in the age range 16-40 years, with 22% in elderly patients. Previous studies show a high incidence among the young age group with a resurgence in elderly patients.[1,2,9,10] Most of the studies show right face involvement in about 60% of the cases, which is also reflected in our study.[3,6,11]

There is a high incidence of bell's palsy in pregnancy, diabetes mellitus, and hypertension.[7,8] Two of our patients with bell's palsy were in the third trimester of pregnancy. Diabetes mellitus and hypertension were noted in our patients in the elderly age group which may have confounding factors.

The prognosis of bell's palsy is very good with complete recovery in 70 to 85% of the patients. Spontaneous recovery is also reported.[3-5] 73% of our patients had a complete recovery.[5] patients had poor recovery. Among the poor responders, one of the patients did not receive steroids whilst there

was a week delay in starting steroids in the second patient. Certain misconceptions and myths about the disease have been studied by Dr. Mansoor and Naveed's team leading to delayed presentation and hence the poor recovery.[12,13]

CONCLUSION

The common risk factors were hypertension, diabetes, and pregnancy in chronological order. Full recovery was seen in almost three fourth of the patients. There is strong evidence of benefits from early use of corticosteroids.

REFERENCES

1. Tiemstra JD. Bells palsy: Diagnosis and management. Am Fam Physician. 2007;76(7):997-1002.
2. Taylor DC. Bell palsy [Online] 2022 (cited 1st Jan 2022). Available from URL: https://emedicine.medscape.com/article/1146903-overview.
3. Gilden DH. Bell's Palsy. N Engl J Med. 2004;351(13):1323-31. DOI:10.1056/nejmcp041120
4. Goroll AH, Mulley AG. Primary care medicine: office evaluation and management of the adult patient. Philadelphia (PA; Lippincott Williams & Wilkins; 2012.
5. Gagyor I, Madhok VB, Daly F, Sullivan F. Antiviral treatment for Bell's palsy (idiopathic facial paralysis). Cochrane Database Syst Rev. 2019 Sep 5;9(9):CD001869. DOI: 10.1002/14651858.CD001869.pub9.
6. Loukas M. The neurologist's dilemma: A comprehensive clinical review of Bell's palsy, with emphasis on current management trends. Med Sci Monit. 2014;20:83-90. DOI:10.12659/msm.889876
7. Hilsinger RL Jr, Adour KK, Doty HE. Idiopathic facial paralysis, pregnancy, and the menstrual cycle. Ann Otol Rhinol Laryngol. 1975;84(4 Pt 1):433-42. DOI:10.1177/000348947508400402
8. Riga M, Kefalidis G, Danielides V. The role of diabetes mellitus in the clinical presentation and prognosis of Bell palsy. J Am Board Fam Med. 2012;25(6):819-26. DOI:10.3122/jabfm.2012.06.120084
9. Glass GE, Tzafetta K. Bell's palsy: a summary of current evidence and referral algorithm. Fam Pract. 2014;31(6):631-42. DOI:10.1093/camera/cmu058
10. Tovi F, Hadar T, Sidi J, Sarov I, Sarov B. Epidemiological aspects of idiopathic peripheral facial palsy. Eur J Epidemiol. 1986;2(3):228-32. DOI:10.1007/bf00211536
11. Ahmed A. When is facial paralysis Bell palsy? Current diagnosis and treatment. Cleve Clin J Med. 2005;72(5):398-405. DOI:10.3949/ccjm.72.5.398
12. Mansoor SN, Rathore FA. Myths and misconceptions regarding facial nerve palsy management: Interesting perspectives From a developing Country. J Neurosci Rural Pract. 2015;6(3):454-5. DOI:10.4103/0976-3147.158756
13. Naveed S, Tasleem HN. Bell's palsy "laqwa": Survey based study. Open Access Libr J. 2014;1(4):1-5. DOI:10.4236/oalib.1100487

Author's Contribution

MAH Contributed to conceptualization, methodology, and writing of the original draft. MIK and MIH referred the patients of Bells Palsy and contributed in the collection of data. AA and SA helped in data collection and drafting of manuscript. Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Conflict of Interest

Authors declared no conflict of interest

Grant Support and Financial Disclosure

None

Data Sharing Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.