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STUDY OF CLINICAL PROFILE OF PATIENTS WITH BELLS PALSY IN TERTIARY CARE CENTRE AT THANJAVUR MEDICAL COLLEGE AND HOSPITAL.

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ABSTRACT **Introduction:** Bells palsy is neurological condition with acute onset Lower motor neuron type (LMN) type of facial weakness. Etiology is unknown. This study was done to study clinical profile of patients with bells palsy where age and gender distribution, variation in clinical manifestations ,seasonal variations and relation to co morbidities, prognosis were studied **Materials and methods:** This was observational study done during period of September 2018 to August 2019 in department of neurology in Thanjavur Medical college Hospital. Both inpatients and outpatients who came with features of LMN facial palsy were included in this study. Primary objective was to study the clinical profile of patients with Bells palsy and their prognosis. Patients with possible trauma,stroke as cause of facial weakness and patients with multiple cranial nerve palsy were excluded from the study.All the patients went through an organised convention of clinical assessment,examination and few special examination as per clinical protocol for analysis. **Results:** Bells palsy was common in age group of 21-30 years, females were more affected than males.Postauricular pain was found in 58 percentage of patients. **Conclusion** In our study,we observed that Bells palsy occured commonly in 21-30 years of age and females were more affected than males. Higher incidence was seen in winter season.Complete recovery was seen in majority of patients (81%) with adequate treatment and physiotherapy

KEYWORDS : Facial nerve, Bellspalsy, Lower motor neuron paralysis, trauma, postauricular pain

INTRODUCTION

Facial nerve is a mixed nerve with motor, sensory, parasympathetic components ,paralysis of which can cause difficulty in closing eyes, abnormalities in tearing and salivation etc which has physical ,mental and emotional impact . Bells palsy is acute onset Lower motor neurone (LMN) facial weakness of unknown cause which presents with varying degree of facial weakness.[1] Annual incidence is about 15-30 per 100000 population. Majority of patients recover completely, but about 15-30 percentage have residual deficit.[2]

Facial nerve thickening with edematous perineurium and diffuse inflammatory cell infiltration and Degenerative changes in myelin sheaths are seen in facial nerve in Bells palsy.[3]Possible mechanism is thought to be due to herpes simplex virus infection mediated inflammatory response, though no conclusive evidence present.[4]

The other non infectious mechanism like ischemia of facial nerve due to diabetes, hypertension , dyslipidemia have been postulated.[5] Immune mediated mechanism causing reactivation of latent herpes simplex or varicella zoster virus following vaccination with intranasal influenza vaccine was also suggested as possible mechanism.[6] Possibility of genetic and hereditary factors have also been studied.[7]The hypercoagulable state and relative immuno suppression seen in pregnancy was a possible explanation for occurrence of Bells palsy in pregnancy .Increased occurrence of Bells palsy in pre eclampsia has been observed.[8,9]The site of facial nerve involved based on presence of abnormality in lacrimation,salivation and by assessment with tests such as Schirmer test for lacrimation, stapedial reflex can be done,however they are of moderate accuracy.[10]All the patients with new onset Bells palsy are treated with short course of steroids .[11]Treatment with combination of antiviral plus glucocorticoids showed only small benefits.Treatment with antiviral alone showed no benefits.[12]This study was done to study the clinical profile of patients with Bells palsy where age and gender distribution, variation in clinical manifestations ,seasonal variations and relation to co morbidities, prognosis were studied

OBJECTIVES

To study the clinical profile of patients with Bells palsy and their prognosis.

MATERIALS AND METHODS

This was observational study done during period of September 2018 to August 2019 in department of neurology in Thanjavur Medical college Hospital. Both inpatients and outpatients who came with features of LMN facial palsy were included in this study. Patient information was collected after obtaining informed consent. Total of 100 patients were included in this study. Detailed clinical examination,Blood investigations, CT brain and CT temporal bone, facial NCS was done for all the patients.

Inclusion Criteria

1. Patients with LMN facial palsy
2. Age group of 5-70 years of age.
3. Patients with isolated facial nerve palsy

Exclusion Criteria

1. Patients with possible trauma,stroke as cause of facial weakness
2. Patients with multiple cranial nerve palsy.

Study Methodology

This was observational study done during period of September 2018 to August 2019 in department of neurology in Thanjavur Medical college Hospital. Ethical board committee clearance was taken from the college. Both inpatients and outpatients who came with features of LMN facial palsy were included in this study.A total of 100 cases were included in this study after getting informed consent from patients.

Primary objective was to study the clinical profile of patients with Bells palsy and their prognosis. .Patients with possible trauma,stroke as cause of facial weakness and patients with multiple cranial nerve palsy were excluded from the study. All the patients went through an organized convention of clinical assessment, examination and few special examination as per clinical protocol for analysis of LMN facial weakness. Clinical profile was studied using parameters such as Age distribution, sexdistribution, presence of comorbidities.Symptom analysis and seasonal variations,prognosis were studied.Statistical analysis was done using Chi-square test .

RESULTS:

A total of 100 cases with LMN facial weakness were included in our study. Overall out of 100 cases,56 percentage were females. Most common age group affected was 21-30 years of age, followed by 41-50 years of age.

Table :1 Descriptive analysis of gender proportion

Variables	Frequency	Percentage (%)
Female	56	56
Male	44	44

Female population were more commonly affected than male population.

Table :2 Descriptive analysis of age grouping

AGE GROUPING(in years)		
1-10	5	5
11-20	15	15
21-30	19	19
31-40	13	13
41-50	18	18
51-60	19	11
61-70	19	11

The most common age group affected was 21-30years of age.

Table:3 Percentage of comorbidities in patients with facial palsy

variables		Frequency	Percent
Diabetes	Yes	41	41
	No	59	59
Hypertension	Yes	17	17
	No	83	83

Diabetic patients were commonly affected followed by hypertensive

Table:4 symptoms and signs associated with facial palsy

Variables		Frequency	Percent
Drooling of saliva	Yes	100	100
	No	0	0
Difficulty in closure of eye	Yes	100	100
	No	0	0
Watering eye	Yes	95	95
	No	5	5
Taste abnormality	Yes	71	71
	No	29	29
Post auricular pain	Yes	58	58
	No	42	42
Hearing abnormality	Yes	33	33
	No	67	67
Vesicle	Yes	3	3
	No	97	97
Fever	Yes	1	1
	No	99	99
Hyperaccusis	Yes	32	32
	No	68	68

Drooling of saliva, difficulty in eye closure were the most common signs.

Table :5 Descriptive analysis of seasonal variation and prognosis

Variables		Frequency	percentage
Seasonal variation	Summer	39	39
	Winter	61	61
Prognosis	Complete recovered	81	81
	Partial recovered	19	19

Bells palsy was common in winter season (61%) and complete recovery was seen in 81 percentage .

DISCUSSION

This study aimed at knowing clinical profile of 100 patients with idiopathic LMN facial weakness/ Bellspalsy. Parameters included in this study was age and sex distribution, seasonal variation, clinical features and prognosis.100 patients in the age group of 5 – 70 years of age were included in this study.Highest incidence was found in 21-60 years of age,most common age group affected was 21-30 years of age and second most common age group was 41-50 years of age..This is comparable with studies done by Alanazi et al. (2022)[13]Similarly in study done by Nikita konnur,Aruningale ,most common age group affected was 21-30 years of age [14].Females were more affected than males in our study.Similar female predominance were seen in studies done by Alanazi et al (2022)[13]where percentage of female affected was 86 precentage. Similarly female predominance was also seen in study by Nikita konnur, Aruningale (2019)[14]Our study showed that common comorbid condition was diabetes mellitus followed by hypertension.Study done by Zhao hua et al showed similar result. [15]Bells palsy was more common in winter season.These were found comparable with study done by Movahedian et al and valenca et al [16,17]

In contrast,in study done by Zhao Bells palsy was frequently seen in summer and spring,especially September.[15]Among clinical presentation, Drooling of saliva, difficulty in eye closure were the most common complaint. Postauricular pain was seen in 58%, of patients..In a study done by Pietersen,he found that 52% of his patients were suffering from postauricular pain .He also observed and concluded that patients with postauricular pains had significantly worse prognosis than those without pains.[18] However in our study,no significant relationship between occurrence of postauricular pain and worse prognosis with delayed recovery were observed. Taste sense was affected in 71 percent of cases,comparable with study done by Pietersen where 83 percentage of cases had taste impairment.[18] Complete recovery was seen in 81 percent of patients on follow up. This was comparable with study done by Nikita konnur ,Aruningale (2019) where recovery was seen in 76 precentage of study population[14].Similar results were found in study done by Pietersen who studied the natural history of Bell's palsy in 1000 patients over a period of 15 years. In his study, 84% showed complete recovery and only 4% out of the remaining 16% had poor recovery. In study done by Adour et al ,recovery was seen in 90 percentage .[14]

CONCLUSION

In our study, we observed that Bells palsy occured commonly in 21-30 years of age and females were more affected than males.Higher incidence was seen in winter season.Complete recovery was seen in majority of patients (81%) with adequate treatment and physiotherapy.

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