VOLUME-8, ISSUE-4, APRIL-2019 • PRINT ISSN No 2277 - 8160

Original Research Paper

Neurology

A STUDY ON SEASONAL INFLUENCE ON BELL'S PALSY

Dr. A. Veni MD, DM(Neuro)

Dr. S. Palaniyappan* MS(ENT) *Corresponding Author

ABSTRACT

Bell's palsy is the sudden onset of unilateral Lower motor Neuron(LMN) type of dysfunction of the seventh cranial nerve palsy that results in paralysis of the facial muscles on the affected side .The aim of this study was to determine the seasonal patterns of the Bell's palsy in Mahathma Gandhi Memorial Government Hospital / KAP.Viswanatham Government Medical college –Trichy, Tamilnadu, India. Seasonal distribution have been discussed in several studies with variable, often contradictory results .In our present study we found significant statistical relation between seasonal variation and Bell's Palsy. The risk of Bell's Palsy is high during the summer and low during the monsoon rainy season.

Summary:

Methods: This study was conducted in the Department of Neurology Mahathma Gandhi Memorial Government Hospital / KAP.Viswanatham Government Medical college –Trichy, Tamilnadu, India . In the three year study period from March 2016 to February 2019, we reviewed 113 patients who were affected with Lower Motor Neuron type of facial palsy . Among them 63 (56%) were diagnosed as Bell's Palsy. Patient distribution patterns by month ,season, age groups and gender difference were studied. For statistical analysis Data were entered onto SPSS 15.0

Results: Numbers of patients with Bell's Palsy presented in various seasons includes , Fifteen patients reported during winter, twenty four patients reported during summer , eleven patients during monsoon rainy season and thirteen patients during post-monsoon period.

Conclusion: In our present study we found significant relation between seasonal variation and occurance of Bell's Palsy. The risk of Bell's Palsy is high during the summer and low during the monsoon rainy season.

KEYWORDS : Bell's Palsy, Lower Motor Neuron Facial palsy , seasonal variation, summer, monsoon rainy season.

INTRODUCTION:

Bell's palsy is the sudden onset of Lower Motor Neuron type of unilateral dysfunction of the seventh cranial nerve that results in the paralysis of the entire half of the facial muscles on the affected side [1]. Seasonal distribution have been discussed in several studies with variable, often contradictory results [2, 3]. The aim of this present study was to determine the age , sex distribution and seasonal patterns of Bell's palsy .

MATERIALS AND METHODS:

This study was conducted in the Department of Neurology Mahathma Gandhi Memorial Government Hospital / KAP.Viswanatham Government Medical college –Trichy, Tamilnadu, India . This is a prospective study which is done between March 2016 to February 2019 (three years) .We reviewed 113 LMN facial palsy patients , among them sixty three (56%) were diagnosed as Bell's palsy. Patient distribution patterns by month, season, and age groups were recorded. For statistical analysis Data were entered onto SPSS 15.0.

ETHICAL ISSUES:

To conduct this study, permission was obtained from Department of Neurology and Department of ENT, KAPV Govt Medical College/ MGM Govt Hospital-Trichy, Tamilnadu.

RESULTS:

Among 113 LMN facial paralysis patients who attended our outpatient department between March 2016 and February 2019, sixty three patients (56%) were diagnosed to have Bell's palsy were enrolled in this study . Others (44%) who showed post infectious facial palsy, post traumatic facial palsy,etc were excluded.

In our study the mean age of the Bell's palsy was 37 years (SD 4.24). Among 63 patients, 26 (41%) of patients were males and 37 (59%)patients were females (Fig-1).

In our study, most common age group affected was 41-60Yrs (Fig - 2) irrespective of gender distribution and accounts for forty one percentage of cases(n=26,41%).The youngest patient was two years old and eldest patient was seventy five years old.

The greatest number of Bell's palsy patients reported during March (n = 9, 14.29%), followed by May (n = 8, 12.70%) and December (n = 8, 12.70%). During April and November we had seven patients (n =7, 11.11%) in each month. During the month of October, 6 (9.52%) patients were reported and during the month of June, July, August, February we had three patients in each month. (n = 3, 4.76%). Lowest number of Bell's palsy, only two patients were reported during September (n = 2, 3.17%).

Numbers of out patients with Bell's palsy reported during winter (December, January and February) were Fifteen (n=15, 24%) (Fig-3), summer(March, April and May) were twenty four cases (n=24, 38%), monsoon rainy season (June to September) were eleven (n=11, 17%), and a post-monsoon period (October to November) were thirteen cases (n=13, 21%).

DISCUSSION:

According to Adour *et al. Study they* did not observe any significant differences in the cases of Bell's Palsy occurring during the cold and warm seasons [4]. In one another study, carried out by Park et *al.* also found no significant seasonal distribution of 500 Bell's Palsy cases [5]. In a study carried out by Peitersen E. also found no significant differences from month to month and thus no seasonal variation [6].All these study concluded as no seasonal variation in patients with Bells palsy. But in our study we found, the risk of Bell's palsy was high during the summer season and low during the monsoon rainy season [7].

CONCLUSION:

In our study females were affected more than males, the mean age of the Bell's palsy was 37 years and most common age group affected between 41 to 60Yrs irrespective of gender distribution.

In our study we found significant relation between seasonal variation in the occurrence of Bell's palsy. The risk of Bell's palsy was high during the summer season and low during the monsoon rainy season.

LIMITATION OF THE STUDY :

Small sample size and the results cannot be generalised to a larger population. Therefore further studies are warranted to get a better estimate of Seasonal influence on Bell's palsy and to educate the community for preventive measures.

Fig:1

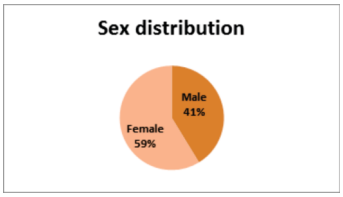


Fig -2

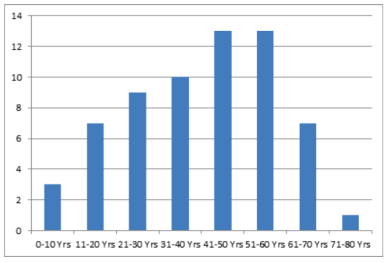
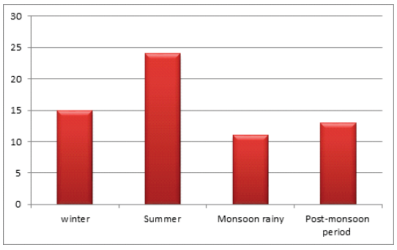


Fig -3



REFERENCES:

1. Campbell KE, Brundidge JF. Effects of climate, latitude, and season on the incidence of Bell's palsy in the US Armed Forces, October 1997 to September 1999. Am J Epidemiology. 2002; 156(1):32-9.
2. Konini S, Lazzarino AI, Iacolucci C, Buffoni A, Barbara M. Epidemiologyof Bell's palsy in an Italian Health District: incidence and case-control study. Acta Otorhinolaryngol Ital. 2010;30(4):198.
3. Danielides V, Patrikakos G, Nousia CS, Bartzokas A, Milionis HJ,Lolis C, et al. Weather conditions and Bell's palsy: five-year studyand review of the literature. BMC Neurol. 2001;1:7.
4. Adour KK, Byl FM, Hilsinger RL, Jr., Kahn ZM, Sheldon MI. The truenature of Bell's palsy: analysis of 1,000 consecutive patients. Laryngoscope. 1978;88(5):787-801.
5. Park HW, Watkins AL. Facial paralysis; analysis of 500 cases. ArchPhys Med Rehabil. 1949;30(12):749-62.
6. Peitersen E. Bell's palsy: the spontaneous course of 2,500 peripheral facial nerve palsies of different etiologies. Acta OtolaryngolSuppl. 2002(549):4-30.
7. https://en.wikipedia.org/w/index.php?title=Climate_of_India&oldid=886266138