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THE STUDY OF CLINICAL PROFILE AND ETIOLOGY OF NON TRAUMATIC PARAPLEGIA

Medical Science

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ABSTRACT

AIM: To determine the etiological factors prevalent in and around Secunderabad contributing to non- traumatic paraplegia. To study the clinical pattern of evolution and presentation of nontraumatic paraplegia.The etiological subcategorization of various non-traumatic paraplegia.

BACKGROUND : Non traumatic paraplegia, although make up significant percentage of hospital admission incidence, clinical presentation and etiology have not been well studied. A better understanding of these issues will assist in the medical management and rehabilitation.

OBJECTIVE : This study aimed to identify the clinical profile and etiologies associated with non traumatic paraplegia.

MATERIAL METHODS :30 patients of non traumatic paraplegia were studied at Gandhi General Hospital. Patients underwent a detailed clinical evaluation followed by laboratory investigations and neuroimaging studies

- Non -traumatic paraplegia is commonly seen in males than females,mode of onset is acute in 42%,sub-acute in 30%and chronic in 27% All 30 patients (100%) presented with weakness of lower limbs,57% had retention of urine,23% backache,23%incontinence of urine,17% fever,3% tingling and numbness.
- **INTERPRETATION AND CONCLUSION:**
- Non-traumatic paraplegia is commonly seen in between 21-40 years of age, more in males. The commonest cause of non-taumatic paraplegia is tranverse myelitis 60%, followed by tuberculosis of spine- 20%, sub- acute combined degeneration -7%, HIV myelitis- 3%, hereditary spastic paraplegia -3%, disc prolapse -3%, spinal neoplasm -3%.

KEYWORDS:

INTRODUCTION

- Etymologically paraplegia means a physical condition simulating that of a person struck by a violent force (Greek: Para-besides; Plesseinto strike).
- Sir Pericall Pott summarized the pathetic plight of paraplegia when he wrote in 1779.It is the sense of being "useless to all others" that makes the paraplegic more miserable then agony of being helpless to him
- American Spinal Injury Association (ASIA) developed and published the international standards for neurological and functional classification of spinal cord injury patients. ASIA defines paraplegia as an impairment of motor or sensory function in the thoracic,lumbar or sacral segments of the spinal cord secondary to damage to neural elements within the spinal cord1
- Many spinal cord diseases are reversible if recognized and treated at an early stage; thus, they are among the most critical of neurologic emergencies. The efficient use of diagnostic procedures guided by knowledge of the anatomy and clinical features of common spinal cord disease is required for a successful outcome 2.
- The etiology of paraplegia differs from one region to other in our own country. During past three decade, several studies to find out the etiology of paraplegia have been carried out at different regions of India.The earliest studies were reported from Bombay, followed by several others from Lucknow 3,4.
- Some of these studies have amply shown that the etiology of paraplegia in India differs from that of west and there are marked regional differences within our country 5,6,7,8,9.
- Thus, this study aims to findout the plethora of symptomatology and etiology of non- traumatic paraplegia in patients admitted to GandhiHospital Secunderabad.

OBJECTIVES

- To determine the etiological factors prevalent in and around Secunderabad contributing to non- traumatic paraplegia.
- To study the clinical pattern of evolution and presentation of non traumatic paraplegia.
- 3.The etiological subcategorization of various non-traumatic paraplegia.

METHODOLOGY:

This study was conducted at Gandhi Medical College for a period of one year from 2012-2013.

Patients presenting with weakness of lower limbs admitted to Gandhi General Hospital and were examined thoroughly as per the proforma. The following methods were adopted for the selection of cases.

Inclusion Criteria :

- Age more than 14 years
- Acute and subacute to chronic onset motor weakness of lower limbs of non trauamtic etiology.
- Paraplegia was diagnosed with help of history, Cinical examination and investigations.

Exclusion Criteria :

- Age less than 14 years
- Patients having traumatic paraplegia
- Patients who presented with history of weakness of lower limbs but on examination if the upper limbs were also involved than those patients were excluded.
- Each case was subjected to the following investigations.

1)Blood: Hemoglobin, Total WBC count, Differential count of WBC, ESR,Peripheral blood smear, Random blood sugar, Blood Urea, Serum creatinine.

2) Urine :Albumin, Sugar, Microscopy
3) CSF Analysis :Clarity, Xanthochromia, Sugar, Protein, Cytology.
4) HIV – I / I I
5) VDRL
6) ECG
7) X-ray spine
8) X-ray chest
9) CT spine
10) MRI Spine

RESULTS

- A total 50 cases were studied.
- Inhospital incidence, nontraumatic paraplegia had an inpatient incidence of 0.7 cases / 1000 during the study period.
- A detailed study of 30 cases of non traumatic paraplegia was carried out between April 2012 to April 2014.
- A detailed study of 30 cases of non traumatic paraplegia over 1 year period showed followed findings.
- In hospital incidence – non traumatic paraplegia has a inpatient
- incidence of 0.7/1000 during study period.

- There was male prepondarance with male:female = 1.7:1.
- Majority of cases belonged to productive age groups of 2nd 3rd and 4th decade.
- 43% had acute presentation while 57% had subacute to chronic onset.
- Progression were gradual in 77% while static in 23%.
- Weakness of lower limb(100%) was commonest presenting symptom followed by retention of urine (57%), Backache (23%), Incontinence of urine(23%) and fever(17%).
- Retention of urine was noted in 57%, incontinence 23% and no bladder disturbance in 20%.
- Hypertonia with hyperreflexia noted in 43%. while 57% had hypotonia with hyporeflexia.
- All the modalities of sensation were lost with definite upper level in 67% while sensory loss was patchy in 10%, impaired in 7% and no sensory disturbance in 17%.
- Spine examination revealed tenderness in 33%, Gibbus in 6% while it was normal in 60%.
- CSF protein level ranged from 30-120mg% with majority (60%)being in normal range. CSF sugar level ranged from 32-90 mg% while cellcount ranged from 0-76 cells/cu mm.
- X-ray spine showed compression with narrowing of disc space in 13.33%,erosion (3.33%), Gibbus(6.66%), Destruction (3.33%) while 73.33% had normal findings.
- MRI spine findings included multiple segment demyelination 70%,intradural lesion 3.33%, inflammatory spondylodiscitis 20%. MRI was normal in 13.33%.
- Transverse myelitis was the commonest cause of paraplegia accounting
- for 60%, followed by TB spine 20%, spinal neoplasm , Disc
- Prolapse and HSP 3.33% each. Subacute combined degeneration 6.67%, HIV myelitis 3.33%.

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