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Case report on Brown Sequard Syndrome

Ms.Mayuri Bhoyar[1], Ms. Swapna Morey[2], Ms. Shalini Moon[2], Ms. Archana Teltumbde[2], Ashish Bhagat[3]

[1]Final Year B.B.Sc. Nursing Student, Smt. Radhikabai Meghe Memorial College of Nursing Sawangi (Meghe), Wardha, Datta Meghe Institute of Medical Sciences (Deemed To Be University), Maharashtra, India
Mob-+91-7972264543
Email ID- mayuribhoyar708@gmail.com

[2]Smt. Radhikabai Meghe Memorial College of Nursing Sawangi (Meghe), Wardha, Datta Meghe Institute of Medical Sciences (Deemed To Be University), Maharashtra, India.

3 Research Scientist, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Sawangi, Wardha, Maharashtra.

Abstract:

Background: Brown Sequard syndrome is thought to afflict about 2% of all traumatic spinal cord injuries. The incidence of all types of spinal cord injuries is estimated to be 3,040 per million each year. It is also known as Brown Sequard Hemiplegia, Brown Sequard Palsy, Hemi-paraplegia Syndrome, Hemi-paraplegia, and Spinalis. Brown Sequard syndrome is a rare type of spinal cord injury caused by a spinal string injury. The most common cause is cervical or lumbar spine injury.

Case presentation: We present a 45-year-old male who came to the neurology department with a complaint of pain in the neck and back along with numbness for 15 days, and weakness of the right upper and lower limbs for 15 days. After meeting with a traumatic incident. The patient underwent thorough Magnetic Resonance Imaging of the brain and cervical spine which shows early degenerative alterations in the cervical spine in the form of diffuse disc bulges at C3C4, C5C6, and C6C7. After that, the patient was shifted to the neuro ward for further management where he was managed with antibiotics, analgesics, antacid, antiepileptic, and other supportive measures. At the present patient is improved neurologically and hemodynamically and vitally stable and got discharged with follow-up after 15 days.

Conclusion: Brown-Sequard syndrome, which is caused by a herniated cervical disc, is probably frequently underdiagnosed and is probably more common than what is shown in the worldwide literature. This assertion sounds credible. It is advised to get surgery early.

Keywords: Brown-Sequard syndrome, Spinal cord injuries, Degenerative alterations

INTRODUCTION

Brown-Sequard Syndrome (BSS) is an uncommon neurological disease with incomplete Spinal Cord Injury. BSS is an easily recognizable syndrome, although it is hard to pinpoint just how common it is. On the other hand, "Brown-Séquard"-like syndromes presumably make up between 2 and 4% of all traumatic SCIs.(1) A motor deficiency on the ipsilateral side and a sensory loss on the contralateral side are symptoms of Brown-Sequard syndrome (BSS). The clinical characteristics of BSS produced by a herniated cervical disc are highly unusual and easily misunderstood.(2)

CASE PRESENTATION:

We present a 45-year-old male who came to the neurology department with a known case of brown Sequard syndrome. The patient is hospitalized with complaints ofneck pain, numbness, and loss of motor reflexes due to a stab in his left shoulder and a fall during combat.

As narrated by the patient he wasgoing for the marriage and in between the guns stops him and ask for money, he refused to give it, so the guns attacked him by stabbing his left shoulder portion of the also he was fall during combat on his left side shoulder. Currently, he is having pain inthe neck and back along with numbness for 15 days, and weakness of the right upper and lower limbs for 15 days. These symptoms started to show after 15 days. Before that, he was admitted to the hospital on the day ofan incident where first aid treatment was done and the patient was suggested to do an MRI and CT scan, that time patient refused to do so.

Along with the above complaints he was readmitted to the tertiary care hospital. Previously for the neck and back pain, he approached the general physician in her locality. The pain was reduced for some time but gradually increased with the numbness after ceasing the intake of analgesics.On neurological examination, the patient had motor weakness in the right-side extremities. Also, he was showing the symptoms of loss of motor reflexes so he was suggested to do MRI.

On radiological investigation, an MRI of the brain reveals chronic infractin left lentiform nucleus. MRI of the cervical spine revealsearly degenerative alterations in the cervical spine in the form of diffuse disc bulges at C3C4, C5C6, and C6C7.
After that, the patient was shifted to the neuro ward for further management where he was managed with conservative treatment that include steroids, antibiotics, analgesics, antacid, antiepileptic, and other supportive measures. At the present patient is improved neurologically and hemodynamically and vitally stable and got discharged with follow-up after 15 days.

DISCUSSION

Herniation of a disc often occurs in the anterior epidural region; protrusion into the intradural space is uncommon, particularly in cases of cervical disc herniation. 34 The most typical C5/6 and C6/7 cervical IDH sites are.(3-11) Brown-Sequard syndrome (BSS) is characterized by the hemisection of the spinal cord and is typically associated with penetrating spinal trauma, spinal neoplasms in the cervical or thoracic area, or both. Its clinical manifestations include concomitant ipsilateral hemiplegia, loss of proprioceptive sensibility, and loss of pain and temperature sensations on the contralateral side.(12-18)
Transverse hemisection of the upper spinal cord causes homolateral paralysis of the upper motor neurons, contralateral loss of pain and temperature feeling below a few levels of the lesion, vasomotor paralysis, and loss of position and vibratory sensation above the level of the lesion. Even though extramedullary spinal neoplasms and spinal trauma are the two most common causes of Brown-Sequard syndrome, its discogenic origin is uncommon.(19-20)
Within six months of the damage, patients with Brown-Sequard syndrome may regain nearly all of their motor function. Patients with blunt trauma rather than penetrating trauma have a better chance of recovering.(21)
Most BSS cases respond well to conservative treatment, which includes local wound debridement and primary closure, a tetanus booster, antibiotics, physiotherapy, and rehabilitation.(22)One of the most common alternative medical treatments in the US continues to be chiropractic manipulation.(23-26)

CONCLUSION:

Brown-Squared syndrome, which is caused by a herniated cervical disc, is probably frequently underdiagnosed and is probably more common than what is shown in the worldwide literature. This assertion sounds credible. It is advised to get surgery early. BSS is frequently linked to trauma but it could also be caused by iatrogenic factors. The authors describe a case of a patient who initially had neoplastic compression of the dorsal spinal cord and later experienced a BSS following surgical decompression and a review of the relevant literature.

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