

P-103 Unusual Case of Meningitis Retention Syndrome : A Case Report



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Introduction

Meningitis retention syndrome (MRS) is known as a sequela of aseptic meningitis exhibiting urinary retention without any other cause. The pathophysiology of this syndrome is not well-known, most cases have been related to viral inflammation, acute disseminated encephalomyelitis, and secondary spinal shock but its association with bacterial meningitis have not been reported. This report presents an unusual case of MRS after bacterial meningitis with long-lasting urinary retention.

Case Presentation

A 26-year-old female patient with no significant past medical history presented with altered mental status and anuria. A week before the symptom, the patient had a fever, cough, and fatigue while traveling in Bali, Indonesia. After traveling, the patient was hospitalized in a local Vietnamese hospital due to dyspnea aggravation, low blood pressure, and comatose state.

The patient received extracorporeal membrane oxygenation and tracheostomy under the diagnosis of cardiogenic shock with myocarditis and pulmonary edema. Initial lab workup showed a white blood cell count of 25,520/ μ L and initial cerebrospinal fluid study revealed 60 white blood cells, glucose 2mg/dL, protein 223mg/dL, suggesting bacterial meningitis.

After one month, the patient's mental status improved to follow simple commands and was transferred to Korean hospital for a long-term treatment in the internal medicine department. After another month, the patient was transferred to the rehabilitation department to enhance lower limb weakness and urinary retention.

On neurological examination, her both lower limbs showed motor grade below trace. She had hypesthesia and paresthesia on both legs. Anal tone was slightly decreased. Brain MRI showed gliotic scar in both perivascular space and medulla oblongata which implies meningitis sequelae. Whole spine MRI showed no abnormal spinal cord signal intensity change nor enhancement.

After one month of rehabilitation, muscle strength in both lower limbs improved from trace to poor, while urinary retention persisted until three months after the symptom onset. The patient with a normal urinary analysis removed Foley-catheter with administration of bethanechol and silodosin. The patient failed to initiate voiding with a measured intravesical urine volume over 500mL. After two weeks of bladder resting, Foley-catheter removal was tried once again, but ended up with the same result. Though she continued to show improvement of muscle strength and ambulatory function, MRS persisted.



Fig 1. Whole spine MRI shows normal findings

Conclusion

This rare case implies MRS related to bacterial meningitis can also induce urinary retention, while previous studies of MRS mostly described its cause as viral infection. Though MRS in aseptic meningitis generally recovers within a month, our case of MRS caused by bacterial meningitis showed protracted recovery. Therefore, clinicians should aware that patients with meningitis may exhibit chronic urinary retention.