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Acute transverse myelitis in puerperal women

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Abstract— *Transverse myelitis is a pathology, whose etiology is associated with autoimmune or infectious diseases, which directly affects the spinal cord, coursing with motor, sensory and acute or subacute dysfunction9. We report a case of a 32-year-old multiparous woman who, after the first postpartum day, reported pain and paresthesia in the lumbar and lower limbs with progressive worsening. Patient started clinical investigation, with orthopedic causes ruled out, together with the neurology and neurosurgery team. She underwent magnetic resonance imaging of the thoracic and lumbar spine where infectious neuropathy was evidenced at L4-L5. Patient was transferred to a referral hospital where Mycobacterium tuberculosis was evidenced as the cause and, when performing a rapid test for SARS-CoV-2, it was positive.*

Keywords— ***puerperium, acute myelitis, tuberculosis infection.***

I. INTRODUCTION

Acute Transverse Myelitis (TM) is an inflammatory or infectious condition considered rare due to an incidence of 1-4 cases per million/year. A condition that affects the motor and sensory pathways of the spinal cord and may lead to loss of strength in the lower limbs, paresis and paresthesia of ascending progression11. Its condition usually presents with low back pain, sudden onset paresthesia and symptoms of the autonomic system such as urinary and fecal urgency or constipation, but may vary according to the affected site1. It affects both genders and in a bimodal way, reaching ages of 10-19 years and 30-39 years12, and has a wide spectrum of etiologies ranging from idiopathic or associated with other diseases such as: multiple sclerosis, ischemia, autoimmune and tissue diseases connective tissue, viruses, bacteria, and intra- or extra-axial neoplasms13. The diagnosis can be made through imaging tests such as magnetic resonance imaging or assessment of cerebrospinal fluid pleocytosis14. Treatment consists of the administration of steroids, plasmapheresis and glucocorticoids, depending on the etiology[3]. The prognosis varies from remission of the condition to the evolution of paraplegia or death from respiratory failure or neck injury15.

The present work aims to present a clinical case of acute transverse myelitis in a puerperal patient.

II. CASE REPORT

Patient, 32 years old, G4PN3A0, in a stable relationship, manicurist, seeks care at a maternity hospital with a complaint of “fluid loss for 23 days”. On examination, blood pressure was 150x100 mmHg, single fetus, longitudinal, cephalic, back to the left, BCF 142 bpm, without uterine dynamics. Routine requested for preeclampsia, serology (HIV, HBsAg, Anti HCV and VDRL) and obstetric Doppler ultrasound. Proteinuria (+) and other tests without changes were evidenced, as a conduct, hospitalization was requested. The patient progresses to vaginal delivery and, on the first postpartum day, there is a report of pain complaints in the lower limbs (LL) evolving over the days with intense pelvic pain and progressive paresthesia. Start using Methyldopa 500 mg 1x a day, cephalexin 500 mg, analgesia and anti-inflammatory drugs. On the fifth day of hospitalization, an orthopedic cause is ruled out through specialist evaluation. On the eighth day of hospitalization, the patient reports intense pain that disables ambulation, associated with constipation. On the twelfth day, the patient still complains of severe pain in the lower limbs and lumbar region, which is evaluated by neurology, which describes it as “shock” pain, starting in the third trimester of pregnancy, but the patient was able to carry out their daily activities, with worsening in the puerperium. The examination reveals

hypotrophy and hypotonia of the lower limbs and magnetic resonance imaging of the thoracic and lumbar spine is requested. In the conduct, gabapentin and amitriptyline were added for pain management.

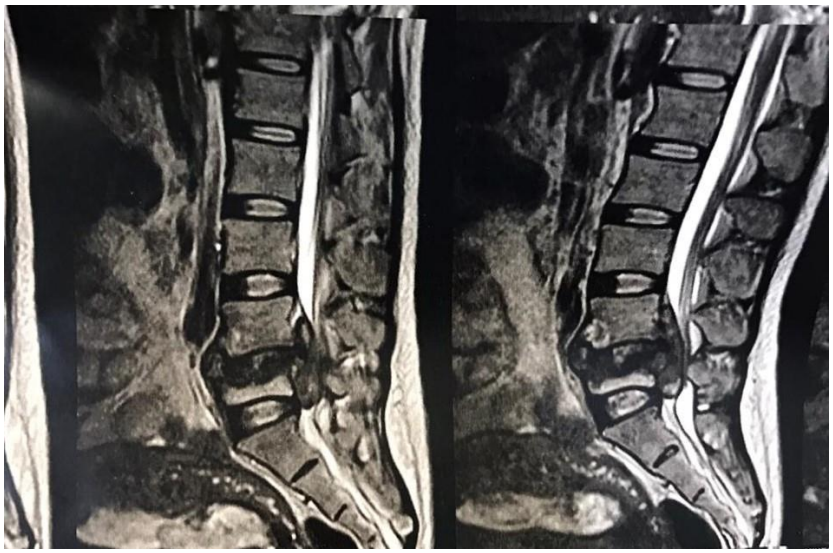

Fig.1 - Magnetic resonance imaging of the lumbar and sacral spine showing an abscess between L4 and L5.

Fig.2 - X-ray of the lumbar and sacral spine showing an abscess between L4 and L5.

On the twentieth day of admission, clinical neurology evaluation was performed after magnetic resonance imaging found an extensive inflammatory/infectious process in L4-L5 with extension to the spinal canal causing stenosis of nerve roots. Transfer to a tertiary hospital for follow-up with neurology and neurosurgery was suggested. A rapid test for Sars-Cov-2 was performed and the result was positive. The patient did not report any respiratory symptoms in the maternity ward. In the tertiary hospital, a sample of the spinal cord injury was collected, where Mycobacterium tuberculosis was evidenced in the rapid molecular test. Currently, the patient is in the process of recovery, with partial improvement of movements and motor and sphincter sensitivity.

III. DISCUSSION

Cases of Transverse Myelitis due to Tuberculosis are rare or little reported in the scientific community8. It is necessary to take into account the immunological changes that occur during pregnancy, a cohort study carried out in Sweden evaluated the increased risk of activating tuberculosis during pregnancy and came to the conclusion that, despite the result showing a significant increase in activation in the postpartum period and pregnancy, it is also necessary to assess the incidence of TB due to the continuous risk of renewed exposure6. Immunosuppression that occurs in pregnancy to prevent rejection of the fetus is believed to trigger a selective suppression of cell-mediated immunity and progressively compromise lymphocytic reactivity towards the purified tubercle protein derivative. In the postpartum period, there is a rebound lymphocytic response, called immunorestitution, and this contributes to an increase in the severity of postpartum tuberculosis symptoms5.

IV. CONCLUSION

Acute incomplete transverse myelitis (ATM) is an acute inflammatory disease of focal origin in the spinal cord, with numerous clinical manifestations that occur due to neural dysfunction of the motor, sensory and autonomic pathways that pass through the compromised region. Its etiopathology is still not well understood, and it may be a clinical manifestation of several diseases, but there is a correlation with the immunological component. The case presented is important for its rarity and for being a puerperal patient, with an insidious, acute and disabling condition, which compromised the quality of life, physical and mental health of the woman in her special and long-awaited moment of life. The prevalence of this disease is 1 to 4 cases per million inhabitants per year, and the incidence is up to 0.003%. It can affect patients of any age group, but there is a predominance of the 10-19 and 30-39 age groups. Despite being a rare pathology, it should enter the differential diagnosis when the patient presents suggestive symptoms, and the evaluation by the specialist, directs and leads to an effective diagnosis and specific treatment, minimizing the sequelae of the disease. The diagnosis is based on the clinical findings, after a complete neurological examination and on Imaging exams through Magnetic Resonance of the spine, which usually identifies and locates the lesion, in addition to ruling out local compressive and traumatic phenomena. Blood tests may suggest infectious causes, hypovitaminosis, HIV infection, among others. Lumbar puncture is also an important test, and helps to rule out other infectious causes, and to show the agent involved, which in the case in question is due to the high incidence of infection with the bacterium Mycobacterium tuberculosis or Bacillus of Koch (BK), in the Amazon region, in northern Brazil. Treatment depends on the specific etiological cause, and aims to improve symptoms and preserve the patient's quality of life, depending on the complications and sequelae involved, which can be temporary or permanent. in the case in question, it is due to the high incidence of infection with the bacterium Mycobacterium tuberculosis or Bacillus of Koch (BK), in the Amazon region, in northern Brazil.

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