



POTT'S SPINE MANIFESTING AS PARAPLEGIA IN PREGNANCY AND ITS MANAGEMENT: A CASE REPORT

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ABSTRACT Tuberculosis is a major health concern in India with extra-pulmonary presentation being 66.6% in pregnancy. Spinal TB or Pott's Spine in pregnancy is a rare entity which can lead to paraplegia and adverse foeto-maternal outcomes. Our patient presented at 34+4 weeks POG with bilateral lower limb weakness and backache since 28 weeks period of gestation. Paraparesis being an uncommon complaint in pregnancy, has varied etiology which involves spinal cord. Common causes include traumatic fracture injury, spinal cord compression due to tumor, metastasis, spinal TB, Pyogenic abscess and Transverse myelitis, Polio, Guillain-Barré syndrome (GBS), amyotrophic lateral sclerosis and Syringomyelia being the less common. The history, neurological examination and imaging helps in narrowing the diagnosis. In Pott's Spine, lower thoracic and upper lumbar region are affected the most. WHO recommends 6 months of therapy with intensive phase of 2 months and continuation phase of 4 months which can be prolonged to 12 – 18 months based on symptoms and imaging. Pott's Spine with neurological deficits or those who show progressive deficit even on ATT needs surgery. MRI is ideal in such a condition and prognosis is good with early decompression surgery with ATT.

KEYWORDS : Potts spine , Paraplegia , Tuberculosis in pregnancy

INTRODUCTION

Tuberculosis (TB) is a major health concern in India. Despite the robust Government initiative for its diagnosis & treatment, India still is the epicentre of TB with a quarter of the global burden.[1] It is primarily a pulmonary disease but can have extrapulmonary presentation also. In pregnancy, the incidence of extrapulmonary TB is on rise with the latest reported as 66.6% of cases of TB in pregnancy.[2] When spine is affected it's called Pott's Spine or Spinal TB. It is notorious for vertebral body and disc destruction that can lead to cord compression and then paraparesis or paraplegia. It is rare in pregnancy but has potential for adverse foeto-maternal outcomes. Diagnosis can be delayed and most cases are diagnosed when paraplegia has already occurred. [3] We report a case of Pott's spine in pregnancy with progressive weakness leading to paraplegia who required spinal decompression surgery along with anti-Tubercular treatment (ATT).

Case Report

23 years old, primigravida at 34⁺4 weeks period of gestation (POG) presented with gradual weakness of bilateral lower limbs (left>right) for the past 1 month and unable to bear weight & walk for 15 days. She had a dull backache since 28 weeks POG which was not evaluated. There was no loss of sensation & her bladder and bowel functions were intact. She denied family or personal history of TB in the past. The patient had a regular ANC. Took regular haematinics and immunized against tetanus. She was on tablet labetalol 100 mg twice daily for chronic hypertension since 8 weeks POG.

On admission, the patient was normotensive and had mild pallor. No lymphadenopathy or organomegaly was there. She was conscious with normal speech; her chest was clear and air entry was equal without any abnormal sounds. All cranial nerves were intact & sensory and motor functions of the upper limb were normal. All sensations were intact in both lower limbs however, motor power was abnormal and showed bilateral (B/L) hip flexion 1/5, knee extension in left 1/5 and in right 2/5, (B/L) ankle dorsiflexion 3/5 with minimum muscle wasting. All reflexes were exaggerated & planter up going. On per abdomen, uterus was 34 weeks with single viable foetus in Oblique lie.

Routine investigations were normal and CXR revealed no abnormality. MRI whole spine was planned which revealed a soft tissue lesion ~ 0.8x1.9x3.3 cm along the anterior epidural space extending from T9-T10 vertebra causing effacement of the anterior thecal sac with displacement and compression of the cord. [Fig 1]

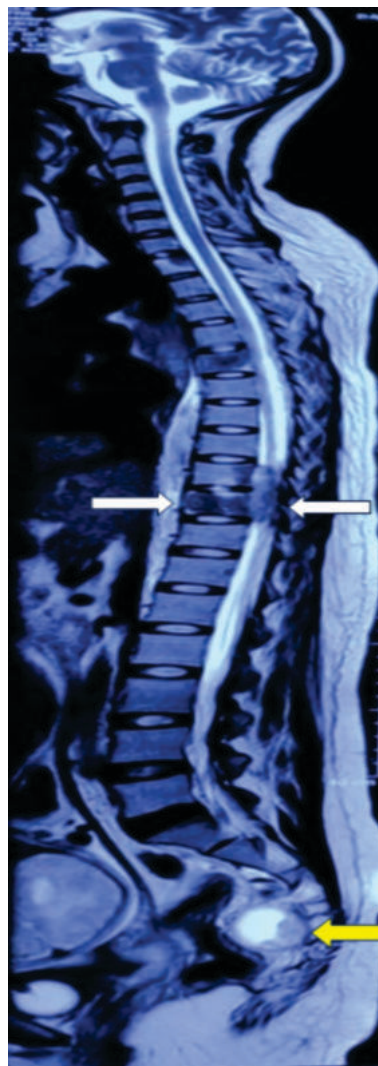


Figure 1: White Arrow Showing Compression Of Spinal Cord, Yellow Arrow Depicting Psoas Abscess.

There was an c/o well-defined lesion in presacral space ~ 3.1x4.9x3.9 cm extending from S4-S5 vertebra level into the posterior epidural space through the left neural foramina at S3-S4 and S4-S5 IVD level. Anteriorly, it was seen abutting the rectum, suggesting cold abscess.

The patient was assessed by the Neurosurgery team and diagnosed as Dermatome9-Dermatome10 Pott's spine. Decompression and fixation surgery was planned early due to the progressive nature of neurological deficits. Elective LSCS was done under general anesthesia at 35th weeks for oblique lie with severe oligohydramnios. The intraoperative period was uneventful. She underwent D8-D12 posterior instrumentation and fixation with a pedicle screw and D9-D10 laminectomy with removal of granulation under general anesthesia in the prone position. Granulation tissue was sent for histopathological examination and reported as Spinal tuberculosis. Her postoperative period was uneventful. The patient was started on ATT (Rifampicin-150 mg, Isoniazid-75 mg, Pyrazinamide-400mg, Ethambutol hydrochloride 275 mg). The baby did not have any evidence of congenital TB but was started with prophylactic ATT. She was discharged after 7 days of spine decompression.

DISCUSSION

Paraplegia in pregnancy is an uncommon complaint. It has varied etiology which involves the spinal cord. Common causes are traumatic fracture injury, spinal cord compression due to the tumor, metastasis, spinal TB (Pott's spine), and Pyogenic abscess. Less common include Transverse myelitis, Polio, Guillain-Barré syndrome (GBS), amyotrophic lateral sclerosis, and Syringomyelia.

The history, neurological examination, and imaging help in narrowing the diagnosis. Our patient had backache followed by progressive lower limb weakness. She didn't have any kind of trauma, there was asymmetrical involvement of lower limbs, with gradual progression, with absence of preceding enteritis ruling out GBS. Further adult-onset symptoms and mild muscle atrophy made polio less likely where childhood onset & severe muscle atrophy is more evident. MRI was planned to know the extent of the disease and involvement of the spinal cord. It showed typical features of Pott's Spine with soft tissue lesion involving T9-T10 vertebra causing effacement of the anterior thecal sac and displacement and compression of the cord and in addition, helped in ruling out metastatic lesions which are multiple with punched-out appearance. Her chest X-ray and Fundus examination both were normal.

Common symptom is backache. Constitutional symptoms like fever and weight loss are present in < 40% of cases. In our patient backache was not evaluated earlier owing to its relation with pregnancy. Fever was absent and maybe the weight loss was masked due to pregnancy. Its indolent nature also adds to the delay in diagnosis.[2]

In Pott's Spine, lower thoracic and upper lumbar regions are affected the most [2]. Similarly, in our patient T9-T10 level was involved.

Therapy with ATT improves maternal and fetal outcomes. [4,5,6] It should be started irrespective of gestation. The dosage is the same as given in non-pregnant female. In our patient, ATT was started soon after the decompression surgery was done. WHO recommends 6 months of therapy with an intensive phase of 2 months with all 4 first-line drugs daily under directly observed treatment short course followed by continuation phase of 4 months with 3 (HRE) drugs. However, in spinal TB duration can be prolonged to 12 – 18 months based on symptoms and imaging. With good drug compliance, this regimen has a cure rate of 90%.

Table 1 First Line ATT With Dosage With Safety Profile In Pregnancy [4,5,6]

Sr No	Drug	Dose in mg/kg/day	Safety profile in pregnancy/ Teratogenicity
1	Isoniazid (H)	5	Safe / Nil
2	Rifampicin (R)	10	Safe / Nil
3	Pyrazinamide (Z)	25	Safe / Nil
4	Ethambutol (E)	15	Safe / Nil

Cases diagnosed in early trimester distant from term are followed up with ATT or decompression surgery has also been reported with fetus in situ in early trimester with successful delivery at term. Labor onset can be awaited. Induction should be done in accordance with obstetrical indication. Vaginal delivery is safe while elective caesarean section (CS) is not a rule in spinal TB. [4] In our case CS was done for

indication of severe oligohydramnios with oblique lie. Breastfeeding is not contraindicated and to be encouraged.

Pott's Spine without neurological complications can be treated by chemotherapy. Specially it's beneficial for patients in the 1st, 2nd, and early 3rd trimester. Pott's Spine with neurological deficits (like in our case) or those who show progressive deficit by virtue of disease progress even on ATT needs surgery.[7] The postpartum period is ideal as the patient can assume prone position and the risk of intraoperative radiation to the fetus is eliminated. If not then surgery with the fetus in situ can also be done with risk of preterm labor, radiation, and anesthesia risk to fetus.

CONCLUSION

Paraplegia with Pott's Spine is a rare presentation in pregnancy. Its diagnosis can be delayed due to its indolent nature and owing to physiological changes of pregnancy. MRI is ideal in such a condition and prognosis is good with early decompression surgery with ATT.

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