Case Report

Spinal intramedullary abscess (SIA) is a rare entity. About 100 cases have been described so far. It is rarer in children. It is more so with tubercular type. Our case was just 2 months old when first presented and the symptoms started when he was just a new born baby. Very few cases have been reported in children. It is often associated with congenital dermal sinus (CDS), a midline skin dimple, in sacral area which is the sign and a type of occult spinal dysraphism. Therefore whenever a dermal sinus is noted in a new born baby possibility of spinal dysraphism has to be ruled out and treated accordingly before it creates a catastrophic infection of the spinal cord. CDS is the commonest cause of intramedullary spinal cord abscess.

Hear we present an infant with intramedullary abscess presented with paraparesis and bowel and bladder...
Case Report

A 2-month-old male baby was referred to us by a pediatric surgeon with the complaint of gradually progressing paraparesis with bowel and bladder incontinence. There was a congenital dermal sinus in the low back in the midline (Figure 1). In addition, there was another sinus just beside that which was discharging pus on and off.

Thinking the possibility of some sort of spinal lesion, MRI plain and contrast was done which revealed fluid collection in the intramedullary space of spinal cord at the level of L3-4-5-S1 suggesting abscess formation (Figure 2).

Immediate surgical intervention was advised for drainage of pus and histological evaluation of the lesion. But patient party denied, thus the baby was put on steroid therapy. Some improvement in the leg movement was noted after some time. The baby was brought to hospital again with the complaints of paraparesis worse than before. Repeat MRI showed worsening and increasing size of previous intramedullary abscess. Surgery was again suggested and finally approved by the parents of baby. Under general anesthesia and in prone position and midline incision, right hemilaminectomy was done at the level of L3-4-5-S1. Dura was incised and spinal cord, conus and cauda equina were exposed which were swollen and congested. Midline myelotomy was done opening the intramedullary space. Free flow of thick pus was observed (Figure 3). Pus was drained and collected for culture.

Similarly few pieces of granulation tissue were collected for histological evaluation. Intramedullary space was thoroughly irrigated with normal saline and Gentamycin solution. Dermal sinus was excised and closed.

Pus culture for 72 hours was negative and histological examination of the tissue showed features of tuberculosis. Antitubercular treatment was started and the baby became much better.

Discussions

In most of the pediatric cases SIA is often due to CDS as described above and as explained in our case report. However, in adult SIA can be due to other various causes such as vertebral infection or osteomyelitis.
infection is usually found in patients with compromised immunity, diabetes, tuberculosis etc.

CDS is a type of occult spinal dysraphism characterized by a midline skin dimple. It has to be explored and investigated in the line of spinal infection if presented with neurological deficit. CDS are the commonest cause of intramedullary spinal cord abscess.\(^4\)\(^,\)\(^5\)

Tuberculosis is not a fatal disease anymore in this 21st century. However resurgence of tuberculosis has been found everywhere due to immunocompromised health status and due to global migration. Central nervous system involvement is one of the most serious forms of this infection, acting as a prominent cause of morbidity and mortality in developing countries.\(^8\) It can manifest in a variety of forms as tuberculous meningitis, tuberculoma, and tubercular abscess. It is more fatal in small children

MRI is the most reliable and definite diagnostic tool to detect SIA and thus gives hints and clue to further surgical or non surgical management. Chittem el described the typical sign called precipitation sign. Presence of an intradural extramedullary mass at the lower end of the spinal cord associated with holocord T2 hyperintensities of the spinal cord can be called precipitation sign and should raise the suspicion of intramedullary tubercular abscess.\(^3\)

Occasionally SIA can be misdiagnosed as intramedullary mass which will create confusion not only about diagnosis but also for further treatment.\(^9\)

SIA in small children are often found in lower lumbar or sacral region due to underlying dermal sinus and its infection. However, occasionally CDS can also be found in cervical spine which will produce SIA.\(^6\) Similarly, SIA found in adults can be due to different cause like infective endocarditis.\(^1\) Therefore in case of adult thorough cardiac evaluation needs to be done to come to final line of management.

Timely diagnosis and prompt surgical drainage and antitubercular treatment will definitely cure the problem and improve the quality of life.\(^2\),\(^7\),\(^9\),\(^10\)

**Conclusions**

CDS when present in small children should alarm physicians and health workers about possible spinal infection. Prompt investigation and management is required to cure the problem.