In endemic areas in Africa, Asia, and South America, man frequently is host to trematodes of the Schistosoma genus. The infection appears in various organs of the body, with different species favoring specific organs for egg-laying sites. Lesions of S. mansoni and S. japonicum are most pronounced in the intestinal tract and liver, whereas those of S. haematobium are most common in the urinary tract. Lesions have also been found in unusual sites such as the skin, the placenta, and the conjunctivum. A recent review showed that only a few proven cases of schistosomal disease of the central nervous system have been reported, and those in which S. haematobium has been clearly shown to be the causative agent for a spinal cord lesion are indeed rare.

That schistosomiasis (S. haematobium and S. mansoni) is rampant in Nigeria is a well-documented fact, but to our knowledge only one case of schistosomiasis of the spinal cord has been reported, and that was unverified. We are reporting a case of intramedullary schistosomiasis due to S. haematobium which has been histologically verified in a young Nigerian. The patient made a complete recovery following combined laminectomy and medical treatment.

Case Report

A 13-year-old boy came wobbling into the Neurosurgery Clinic of the University College Hospital in Ibadan one morning with a complaint of progressive low back pain, weakness of both legs, and urinary hesitancy of 6 weeks' duration. He had injured his back slightly in a soccer game 2 weeks before the onset of symptoms. There was no history of abdominal pain, fever, or hematuria.

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swollen segments of the spinal cord with a pale-gray moderately firm but nondiscrete intramedullary lesion. Our first impression was that of a diffuse gliomatous neoplasm. The intramedullary granuloma, as later confirmed by histological examination, was chiefly diffuse, and only a few small discrete nodular masses (pseudo-tubercles?) were seen scattered at the surface. The yellow color characteristic of schistosomiasis was not evident. Three very small pieces of tissue were removed for biopsy from nodular areas at the left postmedian aspect of the cord at the 12th dorsal vertebra. The dural incision was supplemented by transverse extension and left open. The exposed spinal cord segment was protected with a layer of gelfoam, and the laminectomy wound closed in layers.

Histological sections (Fig. 2) of the tissue biopsied from the spinal cord mass were characteristic of schistosomal granuloma. Ova of *S. hematobium* were readily identified in the sections. No schistosome ova were found either in the urine or in stool. The urine specimens were collected around midday on 2 consecutive days; the centrifuged deposit was examined under low-power magnification of the microscope. Stool specimens were examined by the glycerine-ether concentration method. Although the limited parasitological tests were negative, the circumoval precipitin test was strongly positive.

The patient received a course of niridazole (Ambilhar, Ciba), 250 mg orally three times per day for 12 days with supportive daily high fluid intake and promethazine Phenergan) 10 mg orally three times per day.

**Postoperative Course.** The postoperative course was satisfactory. Within 6 weeks of operation and medication, the patient's gait had returned virtually to normal and only mild L-4 hypalgesia was detectable. The recovery of neurological functions has since become complete, although slight atrophy of the right leg persisted. At 18 months after laminectomy the patient was still well neurologically.

**Discussion**

Previous authors have repeatedly recalled the possible routes in the journey of the schistosome, from its penetration into the skin to its final ectopic settlement within the spinal canal and cord as ova or, occasionally, the adult fluke. From the portal-caval system, the hemorrhoidal-pelvic-vertebral venous plexi are believed to be favored pathways, a “valveless intercommunicating channel,” as aptly termed by Faust. Hutton and Holland discussed the possibility of “diffuse and irregular bombardment (S. haematobium) of the cord via the vertebral venous plexus.” They expressed concern that ova are not found frequently enough in the cord to strengthen this possibility. It may well be that other factors, such as preexisting trauma to the cord with some disruption of tissue, are also essential for the ova to take hold by reactive tissue changes once they gain access to the cord.

In schistosomiasis, the criteria for clinical diagnosis have been examined by Gelfand. He noted that Kabure bather's itch (caused by passage of cercaria from the water) and