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Qualifications

- MBBS: Faculty of Medicine, University of Khartoum, 1982
- FRCS: The Royal College of Surgeons of Edinburgh, 1990
- FRCS(SN): The Intercollegiate Fellowship in Surgical Neurology, 1994
- Fellowship of the American College of Surgeons (FACS), 2005

Registration with Professional Bodies

- Specialist Register of the Sudan Medical Council
- Specialist Register of the GMC – UK
- Registration with Qatar Supreme Health Council

Professional Membership

- Sudanese Society of Neurological Sciences
- Sudanese Association of Neurosurgery
- Association of Sudanese Surgeons
- World Federation of Neurosurgical Societies (WFNS)
- Pan Arab Society of Neurosurgery
- Pan Arab Society of Neurological Sciences
- Pan Arab Spine Society
- African Federation of Neurosurgical Societies

- The Walter E Dandy Neurosurgical Society
- The Congress of Neurological Surgeons (CNS), USA
- American Association of Neurological Surgeons (AANS), USA
- Past member of the Society of British Neurological Surgeons (SBNS)
- Past member of Swiss Spine Institute
- Past member of the International Spine Arthroplasty Society
- Past Fellow of the Royal Society of Medicine
- Past Member of World Federation of Neurology

Other Activities

- Examiner for the Intercollegiate MRCS in UK
- Member of WFNS Educational & Training Committee
- Member of the Editorial Board of the Pan Arab Neurosurgery Journal
- Member of International Editorial Panel World Neurosurgery Journal
- Founding member of the Pan Arab Society of Neurosurgery
- Founding member of Pan Arab Spine Society
- Founding member of Pan Arab Society of Trauma & Emergency Medicine
- Appointed member of the Supreme Council of Sudan Medical Specialization Board
- Past Examiner for FRCS, Royal College of Surgeons of Edinburgh
- Past Examiner for the Certification of Arab Board in Neurosurgery
 - Trained in Neurosurgery in Charing Cross Hospital and Newcastle General Hospital in UK
 - Past Consultant Neurosurgeon at Charing Cross Hospital in London, Hamad Hospital in Doha-Qatar, and National Ribat University Hospital in Khartoum, Sudan.

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Abstract

Spinal cord schistosomiasis: A treatable cause of childhood paralysis in Sudan

El Fatih B. El Malik

Background and objectives:

Schistosomiasis is a prevalent parasitic infection worldwide where 600 million people are at risk, and over 200 million are infected. Hepatic and urinary systems are the main targets but CNS involvement is considered a rare manifestation of the disease. We report a series of 51 consecutive cases of spinal cord schistosomiasis (SCS) from Sudan, involving mainly the conus medullaris region. We aim to raise awareness among health care professionals about the existence of neuroschistosomiasis. With the ever expanding worldwide network of travel and transport, visitors to tropical areas are at risk of encountering conditions endemic in those parts of the world. This presentation emphasizes the importance of bearing a high index of suspicion when dealing with relevant cases. It proposes a simplified scheme for diagnosis and treatment of SCS.

Methods:

This is a report of a series of 51 consecutive patients with SCS treated over a period of 7 years, between January 2007 and December 2013. There were 32 males and 19 females with age range from 5 years to 65 years, mean 15.9 years. In our management protocol, a patient with positive clinical and MRI features would be given treatment promptly in the form of praziquantel and dexamethasone while undergoing the rest of the investigations. The latter includes serological testing by ELISA. Regular interval clinical and radiological follow up were done.

Results:

Most of the patients - 45 cases (88%) - presented with acute or subacute paralysis of the lower limbs and sphincter disturbance. The remaining 6 cases presented with unilateral lower limb radiculopathy and sphincter disturbance. In keeping with reports in the literature, MR imaging was positive in all the patients and showed diffuse hyperintensity on T2WI and expansion of the distal segment of the spinal cord on T1WI with variable enhancement patterns after contrast injection. These will be highlighted with case presentations. 46 cases (90%) made complete or near complete neurological recovery with corresponding remarkable improvement on follow up MR imaging within 6 weeks of commencing treatment while 6 patients who presented late remained paralyzed. Serology tests were performed for 27 patients and results were reported as strongly positive for active schistosomiasis. Two patients had had complete paralysis for a long time and did not respond to medical treatment, hence underwent surgical intervention. In both cases histopathological studies of the specimens revealed schistosome eggs with granulomatous reaction of the spinal cord.

Conclusions:

- High index of suspicion for SCS should be borne in mind in relevant cases, in schistosomiasis endemic regions or in those who have recently been to these regions.
- Patients, mainly children and teenagers, who present with neurological disorders involving the sphincters and lower limbs, should undergo spinal cord MRI examination including the conus region. Characteristic MRI abnormalities noted in this group of patients will be highlighted that should propose the diagnosis of schistosomiasis.
- Lack of history of exposure to the disease and negative general laboratory test results do not rule out the diagnosis.
- Blood serological test for schistosomiasis carry high sensitivity and specificity that obviates the need for CSF analysis.
- Prompt commencement of treatment with anti-bilharzia drugs, namely praziquantel, and steroids can lead to neurological recovery while delay in the diagnosis and treatment and surgical insult to the oedematous conus region based on the erroneous diagnosis of spinal cord tumour may result in irreversible neurological damage that could involve permanent lifelong lower limb weakness, sphincter disturbance and impotence.

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