Sudden death due to disseminated porocephalosis — a case history

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Summary. An 18-year-old Nigerian girl died suddenly and unexpectedly from disseminated porocephalosis. The patient was hospitalised complaining of fever, dizziness, weakness and jaundice. Clinical examination revealed a restless, confused and hypotensive patient. She died within two hours of admission. Autopsy revealed disseminated Porocephalus armilatus infestation involving the thoracic and abdominal linings and their internal organs. The relationship between the disseminated parasitic involvement and the death of this girl is discussed.

Key words: Sudden death — Disseminated porocephalosis


Schlüsselwörter: Plötzlicher Tod — Disseminierte Porocephalose

Introduction

Death from infection is commoner in developing countries than in industrial societies with better health care facilities. Such disease processes often manifest very characteristic and specific clinical symptoms and although death may result, it rarely occurs suddenly and unexpectedly. The forensic pathologist is therefore rarely concerned with such deaths.

The case presented is of an 18-year-old girl who died within two hours of hospital admission and the autopsy revealed disseminated porocephalosis.

Porocephalosis is a parasitic infestation caused by a worm-like arthropod of the genus Porocephalus and order Pentastomida and is closely related to another parasite of the genus Linguatula. Both are blood-sucking endoparasites of mammals, birds and reptiles [1, 2]. The adult form of Porocephalus inhabits the lungs of reptiles while the immature forms are found in intermediate hosts represented by many vertebrates including man [1, 2]. Infestation in man often leads to a "blind" end in the life cycle of the parasite and no inter-human transmission occurs. Porocephalus species are found in West, Central and East Africa, South-east Asia, China and Japan [3–7] and of approximately twenty species, P. armilatus and P. moniliformis are well known to cause infection in man in Africa and Asia respectively.

Case history and autopsy findings

An 18-year-old Nigerian secondary school girl was admitted on 23 February 1989 into the Casualty Department of the Jos University Teaching Hospital in Nigeria complaining of fever, dizziness, jaundice and weakness. She had earlier taken a natural herbal concoction, routinely used in these areas to treat malaria which brought no relief. Examination revealed a restless and confused girl with a pulse rate of 136 per minute, blood pressure of 100/40 mmHg and a tender hepatomegaly. No definite diagnosis was made and before any further investigation could be carried out, she died about two hours following admission.

Autopsy revealed marked icteric discoloration of the sclerae. Widespread distribution of encysted P. armilatus nymphs were found on the entire peritoneal, pleural and pericardial surfaces, diaphragm, omentum, lungs, liver, serosal aspects of the uterus and pouch of Douglas and the para-aortic region (Figs. 1–3). The mucosal and serosal surfaces of the stomach and all the loops of the small and large intestines showed the presence of these parasites.
Histology of the bowel wall revealed hyperplasia of the lymphoid follicles; encysted nymphs were identifiable within all the layers of the bowel wall and were surrounded by fibrous tissue. The omentum and mesentery showed a similar picture with moderate local eosinophil infiltration. The hyperplastic mesenteric nodes exhibited sinus histiocytosis.

Macroscopic sectioning of the liver, which weighed 2500 g, showed that over 80% of its entire parenchyma was infected by the nymphs. Histology showed minimal