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Extensive cardiac cysticercosis—an interesting autopsy finding

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ABSTRACT

Heart involvement in cysticercosis is rare, and most of the reports of cardiac cysticercosis have been in the form of autopsy studies. Generally, the heart involvement is part of a severe and generalized infection with the presence of only one or few cysts involving the myocardium. We report an interesting case of extensive cysticercosis of heart with innumerable cysts (around 100 in number) on the external surface of the heart on autopsy of a 30 year old female. Microscopic examination revealed wide spread involvement of myocardium. No such case of extensive cardiac cysticercosis has been reported in the literature so far. Apart from reporting a case study, we present interesting illustrations of such extensive involvement of heart in cysticercosis.

1. Introduction

Human cysticercosis is caused by dissemination of embryos of *Taenia solium* from the intestine via the hepatportal system to the tissues and organs of the body[1]. Most common organs affected are subcutaneous tissues, skeletal muscles, lungs, brain, eyes, liver and occasionally, heart[2]. Widespread dissemination of the cysticerci can result in the involvement of almost any organ of the body, however heart involvement is uncommon. Demonstration of cysticerci from the autopsy specimen has been the rule to diagnose heart involvement in disseminated cysticercosis.

2. Case report

We received a requisition for histopathological examination of heart of a 30 year old unknown female. The autopsy had been conducted in a peripheral hospital. All the organs had been reported to be normal on gross examination except the heart which was sent to us for histopathological examination to ascertain the cause of death.

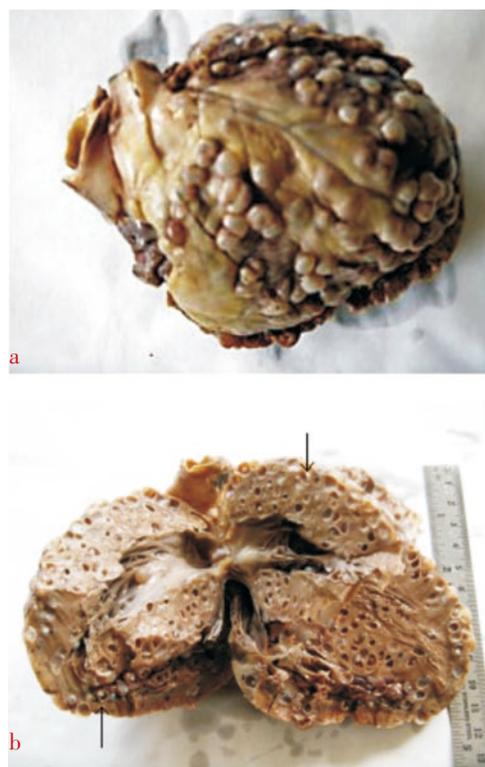


Figure 1. Gross examination of the heart. a: Specimen of heart studded with innumerable cysts (anterior view); b: Cut surface showing extensive involvement of all the chambers of heart. White bead is also evident in many of the cysts (arrows).

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On gross examination, the heart weighed 320 g and measured (12 cm × 9 cm × 5 cm). The external surface was studded with numerous cysts (more than 100 in number) varying in diameter from 0.3–1.2 cm (Figure 1a). On cutting, right and left ventricular walls, and inter-ventricular septum measured 0.8, 2.0 and 2.2 cm in thickness, respectively. Cut surface of the heart also showed innumerable cysts filled with clear fluid and a white bead-like structure in many of them (Figure 1b).

Microscopic examination of the heart revealed widespread involvement of myocardium by numerous cysticerci (Figure 2).

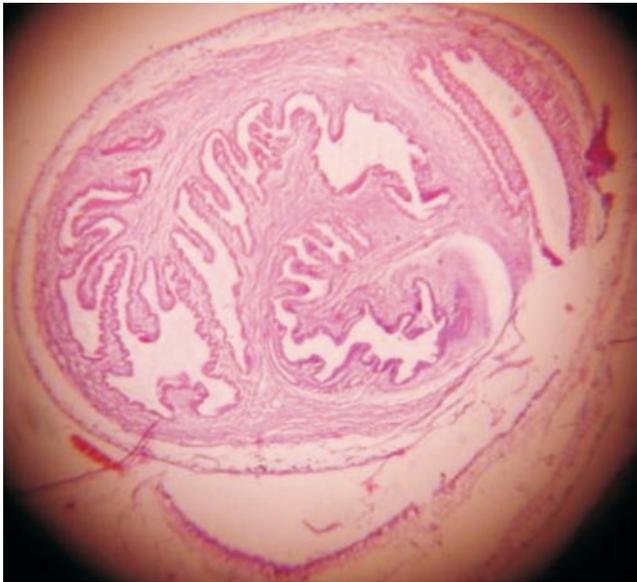


Figure 2. H&E stained microsection from the myocardium showing structure of cysticercus.

3. Discussion

Widespread dissemination of cysticerci throughout the human body was reported as early as 1912 by British army medical officers stationed in India^[3]. In 1964, Reddy and colleagues, reported the first case of cysticercosis involving heart from Guntur in India^[4]. Since then cardiac cysticercosis has been reported from India and all over the world^[5–14].

In the developing countries like India, cysticercosis, along with other parasitic infections, is a major public health problem. Notwithstanding the extensive advancement in the radiological investigative field, very few cases of antemortem diagnosis of disseminated cysticercosis have been reported from India in the past few years^[2,6,8]. Hence, better orientation of the clinicians with judicious and thoughtful use of radiological investigations is required for early diagnosis of cases of cysticercosis and promptly treating them as early as possible.

Perusal of the literature reveals that no case study has demonstrated such extensive involvement of heart in cysticercosis. Hence, in addition to reporting a case of cardiac cysticercosis, the present case study aims to add to the literature, some interesting illustrations of extensive cardiac cysticercosis on gross and histopathological examination.

Conflict of interest statement

We declare that we have no conflict of interest.

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