

Disseminated Cysticercosis

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ABSTRACT

Cysticercosis is a parasitic infection caused by larval cysts of the tapeworm *Taenia solium*. It is highly prevalent in rural areas of developing countries with poor sanitary conditions. We report a rare case of extensive disseminated cysticercosis in a 98-year-old woman who was brought to the emergency department following a fall. The x-ray revealed numerous 'rice grain' calcifications predominantly oriented in the plane of muscle fibres. A broad review revealed pelvic, chest and inferior limb involvement. The findings were consistent with cysticercosis.

LEARNING POINTS

- Cysticercosis is a potentially eradicable disease transmitted via the orofaecal route and prevalent in areas with poor sanitation.
- It is rare in developed countries but may occur in association with migration and travel from endemic areas.

KEYWORDS

Cysticercosis, *Taenia solium*

INTRODUCTION

Human cysticercosis is a parasitic infection caused by ingestion of the eggs of the tapeworm *Taenia solium*. Normally, pigs are the intermediate hosts and humans the definitive hosts. *T. solium* eggs in human faeces are ingested by pigs and mature into oncospheres and metacestodes that disseminate via the bloodstream and are incorporated into the striated muscles and other tissues of the pig. When humans eat uncooked pork meat containing cysticerci, the larvae adhere to the intestinal mucosa, grow, form proglottids, become gravid and release eggs in human faeces. This intestinal infection is called taeniasis.

Human cysticercosis is the result of aberrant transmission when the human, usually the definitive host, becomes an accidental intermediate host after ingestion of eggs in food or water contaminated with faeces through the orofaecal route. The eggs hatch and adhere to the intestinal mucosa and spread via the bloodstream, potentially to any tissue of the body. They mature into cysticerci, causing human cysticercosis.

Treatment of cysticercosis depends on the site of involvement; albendazole and praziquantel are the two commonly used antiparasitic drugs.

CASE DESCRIPTION

A 98-year-old woman, who lived in a nursing facility, was brought to the emergency department following a fall out of bed. The patient complained of low back and right knee pain. Her medical history was significant for dementia, diabetes mellitus, dyslipidaemia and hypertension.

The x-ray revealed numerous 'rice grain' calcifications predominantly oriented in the plane of muscle fibres, highly suggestive of cysticercosis due to haematogenous dissemination of *T. solium* larvae. A broad review revealed pelvic, chest and inferior limb involvement (*Fig. 1*).



Figure 1. X-ray images showing long oval calcifications of cysticerci, the major axis being mostly oriented in the plane of muscle fibres

DISCUSSION

Cysticercosis is endemic in Central and South America, sub-Saharan Africa, India and Asia. It is particularly prevalent in rural areas of developing countries with poor sanitary conditions and where pigs have contact with human faeces. It is rare in developed countries but may occur in association with migration and travel from endemic areas^[1].

We report the case of a 98-year-old patient with thousands of disseminated calcifications caused by ingestion of the eggs of *T. solium*. She had lived most of her life in a rural area where pigs were commonly raised in suboptimal sanitary conditions.

CONCLUSION

Cysticercosis is more prevalent in economically underdeveloped areas. Early detection and treatment of patients with taeniasis will reduce disease burden and the risk of infection. Improved sanitation and the control and management of pig production by veterinary, medical and other sectors will improve disease surveillance, prevention and control^[2].

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