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CYST-WALL CALCIFICATION IN INTRACRANIAL CYSTICERCOSIS

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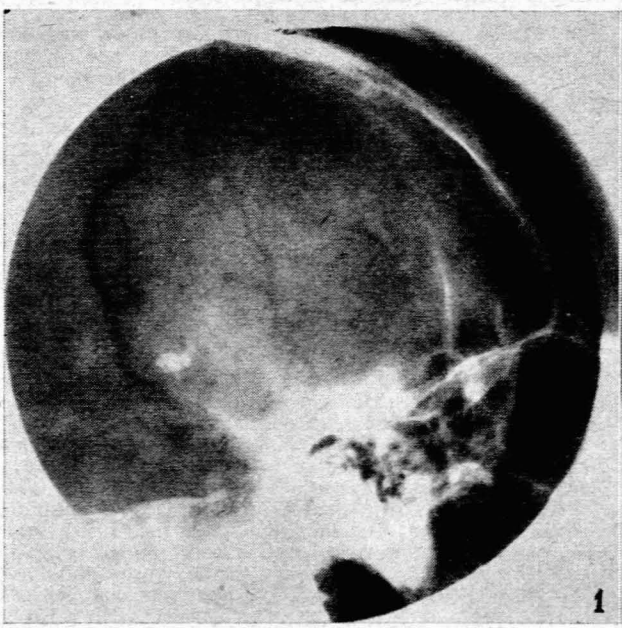
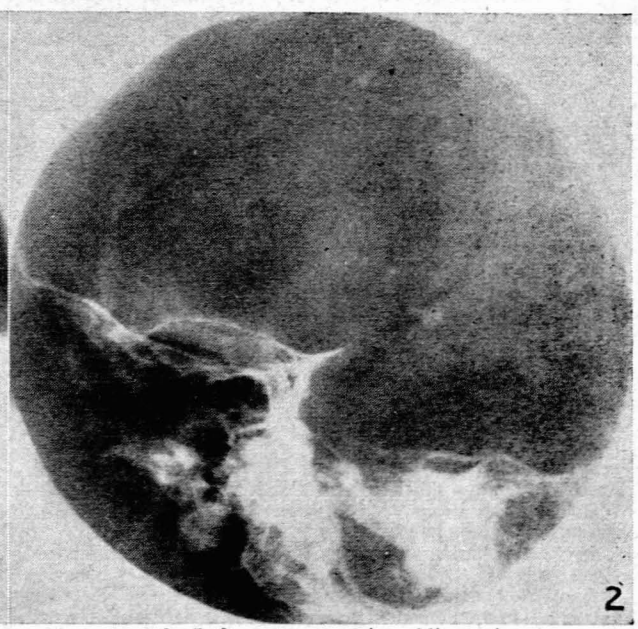
Intracranial cysticercosis has long been recognized as a cause of intracerebral calcification and, although cysticercosis perhaps occurs intracerebrally as frequently as in muscles,[1] radiological demonstration of intracerebral manifestation may not be possible even 10 years after the demonstration of the cysticercus in muscles, and indeed 90% of all intracranial cases never show calcification.[2]

It has long been a subject of argument, however, whether the wall of the cyst calcifies or whether calcification is confined to the scolex. In muscle it is generally accepted that the wall calcifies, but numerous authorities have quoted and demonstrated cases of intracerebral cyst-wall calcification, whilst as many authorities have stated that only the scolex calcifies intracerebrally. Arano and Aserjo[3] showed that, of 71 cases of calcification due to intracerebral cysticercosis, in 66 the scolices only were calcified, but in the remaining 5 the whole cyst wall had calcified. Dixon and Hargreaves[4] demonstrated cases in which calcified scolices are separated from surrounding cyst-wall calcification by translucent 'halos'. Latham[5] categorically states that 'brain cysts quite frequently calcify', and Kooy[6] demonstrates a case of multilocular intracerebral cysts with linear calcifications throughout half the brain and it is obvious from the radiography that this calcification can only be in the cyst walls and not in the scolices.

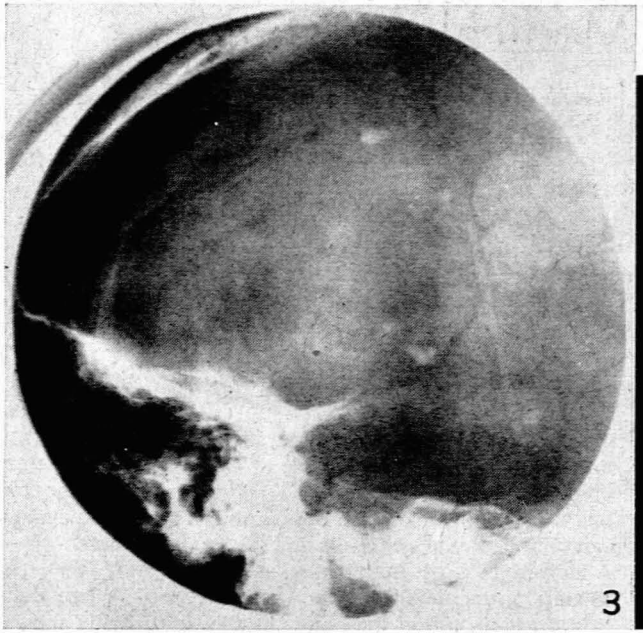
However, most authorities state that only the scolex calcifies intracranially. MacArthur[2] stated, 'When calcification results within the brain the parasite usually shows as small rounded shadows suggesting grains of shot'. This description of small shot-like punctate areas is obviously one of scolices only. Further, as late as 1955 Sutton[7] dogmatically stated, 'The radiological features in the muscles are well known . . . oat-shaped cysts . . .' but he describes intracranial calcification as being 'different in nature . . . small multiple discrete rounded nodules, 1-3 mm. in diameter. This is because in intracerebral cysts only the head of the scolex calcifies'. These and other authors who disbelieve previous demonstrations of intracerebral cyst-wall calcifications pass them over by naively suggesting that these

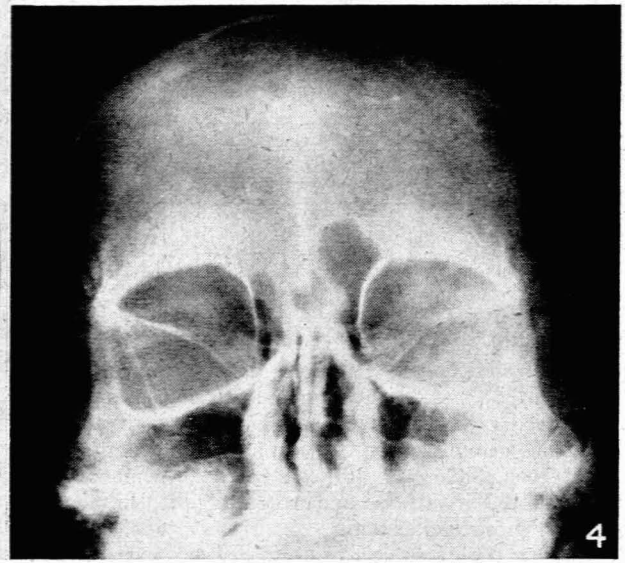


1. Right postero-anterior oblique view.



2. Left postero-anterior oblique view.





3. Lateral view off-centred so that the opacities occupy centre of coned-down area.
4. Postero-anterior projection, nose-chin position.

demonstrations were in fact of calcifications in scalp muscles and not of intracerebral calcification.

In this article I submit a case of cysticercosis, confirmed on biopsy, in which by X-ray views in 4 different planes positive demonstration was obtained of intracerebral cyst-wall calcification.

CASE REPORT

An elderly female who was complaining of vague generalized body pains and especially acute pains in the shoulder joints was sent for X-rays of her lumbar, thoracic and cervical vertebrae and of her shoulder joints. In addition to vertebral osteophytosis and to osteo-arthritic changes in her shoulder joints, multiple oval or rounded opacities up to almost 1 cm. in length were found widely distributed in the soft tissues of the chest, abdomen, neck and upper limbs.

On being questioned the patient was found to have spent the greater part of her life in India. A diagnosis of cysticercosis was made.

Subsequently the patient returned complaining of headaches, which were especially severe retro-orbitally. Her skull was X-rayed and calcified areas identical in size, shape and appearance with the calcified cysts in the soft tissues were noted, and their intracerebral situation proved by the use of views of varying obliquity (Figs. 1-4). In view of the presence of soft-tissue cysticercosis it was considered logical that the intracerebral calcifications could with reasonable certainty be labelled similarly.

SUMMARY

A case of proved intracerebral cysticercosis with definite radiological demonstration of cyst-wall calcification (a condition stated by some authorities not to exist) is presented, and the relative literature is summarized.

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