Submandibular hydatid cyst

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The incidence of hydatid disease varies in different countries. In New Zealand about 100 cases occur each year (Forbes, 1962). In South America, sheep and cattle raising areas of Argentina, Uruguay, Southern Brazil, and Chile are seriously affected (Faust and Russel, 1964). In the Turkana region of Kenya, the incidence of hydatid disease among human beings and livestock is as high as in other high incidence areas of the world (Wray, 1958). Human food contamination by canine faeces containing ova of Taenia echinococcus is increased in people living in close association with these animals. Ingestion of such contaminated food by human beings leads to hatching of ova in the gastro-intestinal tract. Oncospheres pass through the intestinal wall into the portal blood stream. The overwhelming majority of the embryos are retained in the capillary systems of liver and lungs, but a small minority escape to pass to other organs (Manson-Bahr, 1966).

Hydatidosis of head and neck region is uncommon even in countries where Echinococcus infestation is high. Altman *et al.* (1966) reported that there had been 35 cases of hydatid cyst of the parotid salivary gland in literature. They also pointed out that there had been only one report of hydatid cyst of the submandibular gland by Placitelle in 1938. The present case of submandibular hydatid cyst may be of interest because of the unusual site of the disease and lack of any references in the English literature.

Clinical report

A 50-year-old male from Limuru near Nairobi was admitted into Kenyatta National Hospital on 15 December 1969. He complained of a progressively increasing swelling in the right submandibular region for the previous three years. For a week before admission, the swelling had been growing rather rapidly and had become painful. He worked for the East African Railways for a short time, but since 1936 he had been a butcher and traded in cattle. At the time of admission he had cattle, sheep, goats, two dogs, and a cat at home. Two years ago he had operation on the right side of his face at a district hospital.

Examination revealed an afebrile patient with a tense and slightly tender swelling in the right submandibular region. The overlying skin showed no redness and was not warm. Intra-orally the swelling extended from the anterior faucial pillar to the second lower incisor tooth, displacing the tongue upwards and to the left. The overlying mucosa was oedematous. A linear scar about one inch long was present along the lower border of the mandible reaching antero-inferior attachment of the masseter. Underneath the scar was a small cystic swelling. The chest was clear and the liver was not enlarged.

X-rays of the submandibular region showed a soft mass with no radio-opaque shadow or erosion of the mandible. X-rays of the chest were normal.

https://doi.org/10.1017/S002221510007568X Published online by Cambridge University Press

Because of the pain and rapid increase in size, the swelling was surgically explored the day after admission into the hospital. A submandibular approach exposed a large cystic swelling with submandibular salivary gland stretched over it. Oedema and adhesions were marked and a plane of cleavage could not be found. The salivary gland and the cyst were mobilized anteriorly and inferomedially. While attempting mobilization medially and under the oral mucosa, both the cyst wall and the mucosa were injured and opened. A large cavity containing whitish purulent material and sixteen daughter cysts was found (Fig. 1). The cavity was emptied of the contents and was irrigated with 10 per

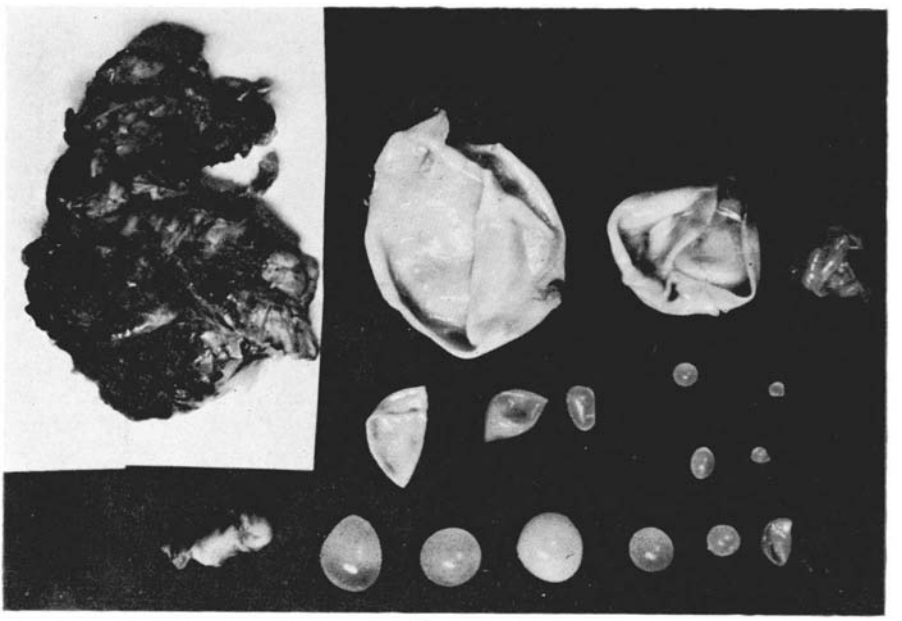


FIG. 1.

Daughter hydatid cysts recovered from the right submandibular region. In the lower left-hand corner is the cyst recovered from underneath the scar along the lower border of the mandible. Submandibular salivary gland is in the upper left-hand corner.

cent formalin solution which was allowed to stand for ten minutes. The salivary gland and the cyst wall were excised. A small cyst was removed from underneath the scar over the lower border of the mandible (Fig. 1, lower left-hand corner). The wound was closed over a corrugated rubber drain. Immediate post-operative recovery was uneventful. The submandibular wound healed normally, but there was discharge intra-orally. Culture showed staphylococcus aureus which was resistant to penicillin, streptomycin and tetracycline, but highly sensitive to erythromycin. On 31 December 1969, the patient had a severe secondary haemorrhage losing about 1½ pints of blood orally. This was successfully treated and following this the patient made good recovery. He has been seen as an out-patient from time to time. He was last seen in April 1971 and was found in excellent health and free of disease.

https://doi.org/10.1017/S002221510007568X Published online by Cambridge University Press

Blood examination on 18 December 1969, showed eosinophil count of 6 per cent and on 12 January 1970, no eosinophils were detected in the blood. Histology confirmed diagnosis of hydatid cyst.

Discussion

Hydatid disease in Kenya is usually associated with the Masai and the Turkana tribes. Nelson and Rausch (1963) reported an Echinococcal infection rate of 63 per cent in domestic dogs in Nairobi, Ngong and Lodwar. These authors considered that the high rate of infection in the Turkana was due to intimate contact with the dogs. In Kenya hydatid disease in uncommon situations has been reported only in the Masai and the Turkana. McClatchie and Manku (1967) reported three cases of orbital hydatid disease, two of which were in Turkanas and one in a Masai child. Clifford (1968) reported two cases of intracranial hydatidosis in Turkanas and one in a Pokot child.

This patient is of interest that he is a Kikuyu, a tribe among whom hydatid disease is not very common. Patient being a butcher, possibly contacted the disease through intimate contact with his dogs who were fed on offal frequently. The site of the disease is of great interest as hitherto being unreported in the English literature. The operation which the patient had two years ago was incision into the cyst which might have been thought to be an abscess in a small peripheral hospital. This is evidenced by the presence of a small hydatid cyst under the scar (Fig. 1, lower left-hand corner). This infliction of trauma must have also induced the formation of daughter cysts which were found in this case. Other most intriguing feature about the case is that the disease occurred in such an isolated situation without evidence of hepatic or pulmonary lesions, though the embryo and indeed many of them must have passed through these areas.

Summary

A case of submandibular hydatid cyst in an adult Kikuyu male is reported.

Acknowledgements

I am very grateful to Mr. P. Clifford for his help and guidance. My thanks are also due to Dr. M. R. Chaudhary of the Department of Health Education for the photograph reproduced in this paper.

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https://doi.org/10.1017/S002221510007568X Published online by Cambridge University Press