Routine biopsy leading to the diagnosis of strongyloidiasis

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Routine removal of a third molar, together with histopathologic soft-tissue examination and a high index of suspicion, led to the diagnosis of a generalized Strongyloides stercoralis infestation. The case of a patient with this unusual combination of pathologic entities is presented.

Strongyloides stercoralis is an intestinal parasite, endemic in the southern United States and Southeast Asia, which primarily infests the gastrointestinal tract. It is a delicate nematode that lives in the duodenal and jejunal mucosa. Its rhabditiform larvae migrate through the intestinal mucosa to involve other organs.

The initial skin invasion produces an erythematous papular rash that is often unnoticed. The adult female eggs and larvae release toxic and lytic chemicals which cause an eosinophilic inflammatory response in the lamina propria of the intestinal tract. Larvae frequently migrate to the liver and other organs, where they initiate an eosinophilic granulomatous response.1

The most common presenting symptoms are abdominal pain and periodic diarrhea alternating with constipation. The acute phase is characterized by a peripheral leukocytosis of 8,000 to 20,000 per cubic millimeter with a 10 to 20 per cent eosinophilia.1

Prognosis is usually favorable except when there are overwhelming infections in patients who have an additional debilitating disease.

The opinions or assertions contained herein are the private views of the author and are not to be construed as official or as reflecting the views of the Department of the Army or the Department of Defense.

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Fig. 1. A firm, expansile mass in the right mandible.

Fig. 2. Panorex radiograph of the large radiopacity and the radiolucency distal to the mandibular right third molar.

CASE REPORT

A frail, 22-year-old Vietnamese woman presented with a chief complaint of a gradually expanding mass in the mandibular right premolar and molar area which, according to her history, had been evident for more than 14 years. The patient weighed 86 pounds and had related a progressive weight loss of 15 pounds during the preceding 4 months. She denied any unusual childhood illnesses or skin rashes. Examination revealed a painless, firm, nonmovable, 3 by 4 cm. mass (Fig. 1) which was covered by a normal-appearing, intact oral mucosa. The mandibular right first premolar and molar were displaced by the growth. The remainder of the physical examination was unremarkable.
Panoramic and mandibular occlusal radiographs of the area (Fig. 2) showed a large radiopaque mass in the right mandibular body and a 0.5 cm. radiolucency distal to the mandibular right third molar.

The oral surgeon removed the impacted third molar and performed an excisional biopsy of the radiolucency and an incisional biopsy of the large radiopacity.

Pathology report

*Specimen A.* The radiopaque lesion was decalcified and the pathology report stated: "Microscopic sections revealed soft and decalcified hard tissue consistent with the diagnosis of complex odontoma."

*Specimen B.* The radiolucent lesion associated with an impacted third molar was received in two parts and diagnosed as follows: "Soft-tissue specimen composed of fat cells, megakaryocytes, and other marrow elements. Numerous eosinophilic leukocytes were noted. The decalcified osseous spicules showed viable bone, with marrow elements and numerous eosinophils." (Fig. 3.) "Comment: An increased number of eosinophils may be indicative of several processes, that is, drug therapy, allergic response, or parasitic infestation. A medical work-up with a complete hemogram and stool cultures for parasites is recommended."

Laboratory findings

The complete blood cell evaluation, chest film, long-bone series, and alkaline phosphatase were within normal limits, except for a 12 per cent peripheral eosinophilia. Stool culture was positive for Strongyloides larvae.

The patient's immediate family was examined, and no evidence of parasitic infestation was found.

Treatment

The patient was treated with 100 mg. of dithiazanine three times a day for 10 days. Follow-up stool cultures were consistently negative. The patient was scheduled for excision of
the odontoma. However, due to circumstances beyond the surgeons' control, this procedure was not performed.

**SUMMARY**

A patient was examined with a dental chief complaint that, in retrospect, was of minor importance when compared to her systemic medical problem. A severe *Strongyloides stercoralis* infestation presented as an innocuous radiolucency associated with an impacted third molar. Following treatment, she regained 20 pounds in weight over a 3-month period and stool cultures for parasites remained negative.

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**REFERENCE**


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