

Trichinosis and cancer of the larynx

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Abstract

A case of trichinosis of the laryngeal muscles which was discovered accidentally during total laryngectomy for cancer of the larynx is presented. Trichinosis is a rare parasitic disease, particularly for the ENT specialist. It is difficult to identify during life. No specific treatment is available. In our case it is suggested that the chronic irritation of the larynx may have resulted in the growth of the cancer.

Introduction

Trichinosis, caused by the intestinal helminth *Trichinella spiralis*, is a rare parasitic disease, particularly to the ENT specialist. Most *Trichinella* infections do not become clinically apparent and many cases are discovered accidentally at autopsies for other diseases. Several cases have been reported from many countries around the world. However, Trichinosis of the larynx combined with cancer of this organ is extremely rare and only three cases have been reported in the literature.

The parasites are freed in the stomach after digestion of uncooked meat and become attached to the intestinal mucosa where they mature to worms. The female releases 200–1000 eggs which produce larvae in 8–18 days. The worms are excreted in the faeces but the larvae penetrate to the bloodstream through the lymphatic system and finally settle in various tissues, particularly the striated muscles of the respiratory system. Here they increase their length almost tenfold and form a cyst of connective tissue which finally calcifies and in which they remain viable for many years (Neafie and Connor, 1976).

Case report

A 60-year-old male patient complained of progressive hoarseness for over 14 months. Two examinations of indirect mirror laryngoscopy during this period failed to reveal any abnormality

until about three weeks before his admission to the ENT ward, when a tumour was detected.

Indirect laryngoscopy revealed an ulcerated tumour of the anterior three-quarters of the left vocal cord with extension to the anterior commissure and the right vocal cord. Both vocal cords had good mobility. Biopsy was positive for squamous cell carcinoma and a decision was made to perform a total laryngectomy.

During the operation, when the anterior muscles of the neck were revealed, they were full of white spots with a diameter of less than 1 mm. A frozen section biopsy revealed 'multiple trichinella worms, some of them calcified, among the muscles'. The whole larynx with some cervical lymph nodes was removed and biopsied. Pathological examination revealed that the lymph nodes were free both of metastasis and trichinella worms. Many trichinella worms were found in the laryngeal muscles and the cancer itself (Figs. 1 & 2). The patient's recovery was uneventful. He was discharged without further medication. Today, after eight years, he is alive and in good health.

Discussion

The coexistence of *Trichinella* and cancer of the larynx has been reported only once before in the literature (Kean, 1966). Two other cases have been reported (Lewy, 1964; Josephson *et al.*, 1989) in which *Trichinella* cysts were discovered in the vocal

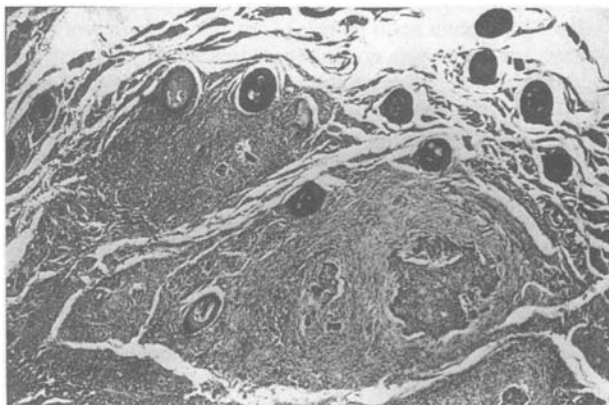


FIG. 1

A focus of squamous cell carcinoma and multiple *Trichinella* cysts.
×10

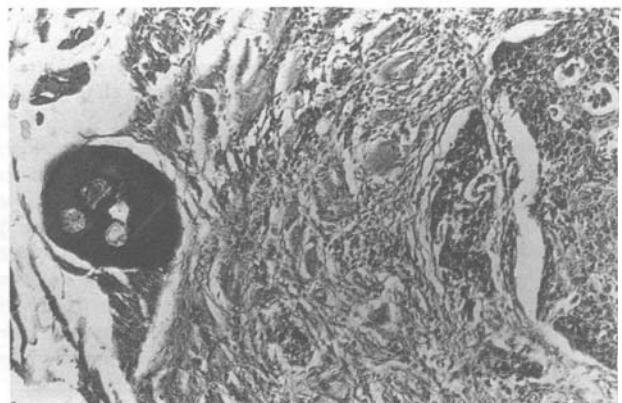


FIG. 2

Simultaneous existence of *Trichinella* and squamous cell cancer.
×40

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cord musculature of the vocal cord opposite to that involved with carcinoma. Our patient did not report any symptoms attributable to the parasitosis. We must point out, however, that he had a long standing history of progressive hoarseness for which there was no apparent explanation. In the case report by Kean, it is suggested that chronic irritation of the laryngeal muscles may have caused the growth of the cancer since the *Trichinella* cysts were surrounded by the neoplastic cells. This could also be suggested of our patient who presented with symptoms for a long time before diagnosis, although repeated indirect laryngoscopic evaluations did not reveal signs of a tumour.

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