LINGUAL ABSCESS

By EUGENE N. MYERS (Boston, Massachusetts) and
JOHN B. ROBERTS (Albuquerque, New Mexico)

LINGUAL abscess is a rarely-encountered inflammatory process of the oral cavity. This is surprising since inflammatory diseases involving other structures in the oral cavity are seen so frequently in the practice of otolaryngology. There has been no mention of this disease in the recent literature, so that the purpose of this case report is to bring it to the attention of the otolaryngologist and to present the differential diagnosis for proper investigation and management.

Case Report

The patient was a 27-year-old white male who had been in good health until *February 21st, 1963*, when he became febrile and noted pain in the left side of his tongue. His local doctor had treated him with hydrogen peroxide mouth wash and tetracycline (250 mg.) four times a day. His general condition improved and the pain decreased somewhat. He visited his local doctor on *March 2nd, 1963*, again with pain in the tongue, and was treated with 600,000 units of penicillin intramuscularly without improvement. The patient was seen at the Massachusetts Eye and Ear Infirmary that evening, at which time a non-fluctuant mass on the left lateral margin of the middle third of his tongue was seen. The patient was given 600,000 units of penicillin intramuscularly and was instructed to use hot oral irrigations. He was not relieved, however, and returned the next evening with pain in his tongue, dysphagia, difficulty in speaking and swallowing his secretions. He had no history of pain or sensation of foreign body in his tongue prior to his present illness, and further questioning revealed that he had always enjoyed good health and had never had tuberculosis or syphilis.

General physical examination was normal. The patient's voice had a peculiar nasal quality. Local examination revealed that his oral cavity was filled with secretions, and that he protruded his tongue with difficulty. His teeth were in good repair. On the left lateral margin of the middle third of his tongue was a 2 × 2 cm. abscess, but it was difficult to be certain of fluctuance. The pharynx, soft palate, tonsils and pillars were normal. Using 4 per cent. cocaine for topical anæsthesia, a #18 needle was introduced into the abscess cavity and 2 c.c. of dark yellow purulent exudate was aspirated. The cavity was then opened widely with a scalpel, yielding another 5 c.c. of pus. The patient's symptoms were immediately relieved, but he was admitted to the hospital for further study and treatment. Complete blood count and urinalysis were normal. Chest X-ray was normal and X-ray of the tongue revealed no foreign body. Intermediate strength PPD was positive. Hinton

https://doi.org/10.1017/S0022215100063672 Published online by Cambridge University Press

was negative. Aerobic and anærobic cultures of the purulent exudate yielded no organisms. Biopsy of the abscess cavity revealed acute and chronic inflammation with necrosis, consistent with abscess wall. The patient was treated in the hospital with procaine penicillin (600,000 units intramuscularly every 8 hours), streptomycin (0·5 g. intramuscularly twice daily), and hot oral irrigations. He made an uneventful recovery and was discharged 5 days later. Subsequent out-patient visits have shown him to be asymptomatic.

Discussion

The ætiology of lingual abscess is often not apparent. Foreign bodies may lead to abscess formation, as can trauma from ragged carious teeth. Abscesses may be subsequent to acute parenchymatous glossitis, infected circumvallate papilla, or may be an independent process. The staphylococcus, streptococcus, diphtheroides and occasional Gram-negative organisms have been isolated from these abscesses. The purulent exudate obtained after incision and drainage has uniformly been described as foul smelling, also suggesting anærobic organisms.

The resistance of the tongue to deep infection may be attributed to a number of factors. The thickness of the covering mucous membrane, the resistance of muscle to infection, the cleansing action of saliva, and the abundance of vascular supply have all been suggested. Constant exposure of the tongue to bacteria may provide a certain amount of local immunity to infection (McLaughlin and Davis, 1942).

The clinical picture of the cases reported are characteristic. All patients presented with fever, pain and swelling of the tongue and difficulty in speaking, swallowing and protruding the tongue. The abscess may be located on the lateral border, the tip, dorsum, or base of the tongue.

The differential diagnosis must include abscess, tuberculosis, gumma, actinomycosis, and inflammation about a carcinoma. Primary tuberculosis of the tongue is theoretically possible, but, in over 400 cases of tuberculosis of the tongue reported, the tongue lesion was always secondary to a demonstrable active pulmonary focus (Douglass and Foss, 1957). The lesion may be nodular or ulcerated, either single or multiple, and never fluctuant. Pain is usually the presenting symptom, but with tuberculosis of the tongue the patient is chronically, not acutely, ill.

Actinomycosis of the tongue is painful but not usually accompanied by constitutional symptoms and there may be a history of chewing straw or grass. In this disease the tongue may be quite stiff and the lesion usually of long duration (Barlow, 1925). Nodular gumma of the tongue presents with pain, but without constitutional signs and a history of lues is usually elicited. Carcinoma of the tongue with secondary inflammation may present a problem in diagnosis which only biopsy of the lesion can resolve. Other conditions mentioned in the literature as possibly being confused with abscess are anthrax, leprosy, inflammatory cysts and pyogenic granuloma.

The investigation of patients with suspected lingual abscess should include history and physical, X-rays of the chest and tongue, skin tests for tuberculosis, serological tests for syphilis, smear and culture of the exudate and biopsy of the area for granuloma or malignancy.

https://doi.org/10.1017/S0022215100063672 Published online by Cambridge University Press

Treatment depends upon the diagnosis and if the abscess is suspected aspiration of the abscess with a large bore needle under local anæsthesia is advisable. If pus is obtained, incision and drainage should follow. If caseous material is aspirated, tuberculosis or actinomycosis must be suspected and further work-up undertaken to confirm the diagnosis. Antibiotics should be given to control the cellulitis surrounding the abscess. Naturally, if the diagnosis of tuberculosis, actinomycosis or gumma is made, the appropriate chemotherapy or antibiotics should be used. The treatment of carcinoma of the tongue depends upon the nature and location of the tumour.

Summary

A case of lingual abscess is reported successfully treated with incision and drainage. Lingual abscess has a characteristic clinical picture. Its treatment is simple and effective and the prognosis is good.

REFERENCES

BARLOW, R. A. (1925) *Laryngoscope* (*St. Louis*), **35**, 314.
DOUGLASS, B. E., and FOSS, E. L. (1957) *Proc. Mayo Clin.*, **32**, 374.
MCLAUGHLIN, C. W., JR., and DAVIS, J. C. (1942) *Amer. J. Surg.*, **58**, 133.

Massachusetts Eye and Ear Infirmary,
243 Charles Street,
Boston,
Massachusetts.

https://doi.org/10.1017/S0022215100063672 Published online by Cambridge University Press