Lingual Tonsillitis

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ABSTRACT: Lingual tonsillitis can cause various signs and symptoms including nocturnal or supine cough, constant discomfort in the throat, glossal pain, and otalgia. Most patients with lingual tonsillitis have already had palatine tonsillectomy. A lingual tonsil may be visible only by using a laryngeal mirror. An embedded foreign body can cause recurrent tonsillitis with abscess formation, and life-threatening airway obstruction may result. Aberrant lingual thyroid may be the only functioning thyroid tissue. Cryosurgery and the CO_2 laser have made lingual tonsillectomy a safe and simple procedure. An abscess of a lingual tonsil should be drained under general anesthesia, and lingual thyroid should be treated conservatively unless it produces obstructive symptoms.

LINGUAL TONSILLITIS is an underdiagnosed and perhaps underreported condition mainly because little attention has been directed toward it and also because its anatomic location may obscure this tissue from a cursory examination of the throat. It is likely to go undiagnosed without the use of a laryngeal mirror. As pointed out by Elia,[1] the problem does not lie in the domain of the laryngologist alone; in fact lingual tonsillitis is more likely to be diagnosed by a family physician who is knowledgeable about this condition.

A lingual tonsil is a nonencapsulated collection of lymphoid tissue situated on the dorsal surface of the tongue posterior to the vallate papillae. Its lymphatic drainage is to the submaxillary, suprahyoid, and deep cervical nodes. Its size is highly variable; it may be small and unilateral or large, symmetrical, and bilateral, and it may extend down to the junction of the epiglottis and the base of the tongue. The median glossoepiglottic ligament separates the lymphatic tissue in the midline. Two thirds of patients with lingual tonsillitis have already had a palatine tonsillectomy or adenoidectomy.[1]

Like palatine tonsils, the lingual tonsil is prone to bacterial infection, and, in addition, tiny sharp foreign bodies can become embedded within it because it lies directly in the path of swallowed food. Undetected foreign bodies may cause recurrent infections despite adequate antibiotic treatment. Abscess formation within a lingual tonsil can be fatal if it is not recognized and treated appropriately. Midline enlargement in the region of the foramen cecum could well be an aberrant thyroid gland, in which benign and malignant changes may develop just as they do in a normally situated gland. In allergic patients, the lymphoid tissue may become hyperplastic, and irritants such as smoke and alcohol may cause inflammation of the lingual tonsil.

Chronic nonproductive cough made worse by lying supine, a constant desire to swallow or clear the throat, and a constant fullness in the throat are common symptoms of lingual tonsillitis or enlarged lingual tonsils. The patient's disorder may be labeled as psychosomatic or as globus hystericus. Lateral roentgenograms of the soft tissue of the neck[2] and a barium swallow may help to delineate the enlarged structure. We present three cases to illustrate the various features of this condition.

CASE REPORTS

Case 1. A 52-year-old woman had had a nonproductive nocturnal cough for one to two years. She denied any cough during the day, and had no history of fever, chills, ear symptoms, nasal discharge, postnasal drip, or difficulty in swallowing. She was a nonsmoker, and had no history of chronic obstructive lung disease. She had had palatine tonsillectomy 20 years earlier.

Physical examination showed a well nourished Asian woman in no distress. Blood pressure was 140/80 mm Hg, pulse 80 beats/min, temperature 98.0 F (36.6 C), and respirations 16/min. There was no evidence of lymphadenopathy,

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and the thyroid gland appeared normal. The throat was not erythematous, and palatine tonsillar tissue was absent. On the right dorsolateral surface of the tongue, posterior to the vallate papillae, there was a 1 x 2 cm noninflamed lingual tonsil that projected laterally and posteriorly and appeared to touch the lateral pharyngeal wall. There was no induration or ulceration. Indirect laryngoscopy showed the enlargement of the lingual tonsil to be restricted to the right side. The posterior surface of the enlarged tissue could not be seen adequately with the laryngeal mirror. Breath sounds were normal, and the remainder of the examination was unremarkable.

The patient was treated with a decongestant and erythromycin, used empirically because a bacterial infection could not be ruled out. There was a marginal response, and the nocturnal cough was controlled as long as the patient used antitussive preparations containing codeine.

This patient has since moved back to her country, where she has continued to have a hacking nocturnal cough without weight loss, anorexia, or any other additional symptoms. We did not do a biopsy because the mass was nonulcerated and nonindurated and there was no adenopathy. Since a malignancy cannot be ruled out altogether, however, she has been advised to see an otolaryngologist for biopsy.

Case 2. A 32-year-old white woman had had a sore throat, fever, and some difficulty swallowing for three to four days, and pain in the left ear for one day. She had a mild nonproductive cough and had noticed a swelling on the left side of her tongue. She had had a tonsillectomy as a child.

Physical examination showed a well nourished woman in no acute distress. Blood pressure was 120/80 mm Hg, pulse 90 beats/min, and temperature 100.5 F (38.0 C). Small shotty nodes were present in the deep cervical chain on the left, and the pharnyx was erythematous. Palatine tonsils were absent. There was a cherry-sized swelling on the dorsum of the tongue, posterior to the vallate papillae and to the left of the median glossoepiglottic ligament. The central area of the mass showed a whitish exudate. The mass was firm, nonfluctuant, and nonindurated, and there was no induration in the floor of the mouth. The remainder of the physical examination was unremarkable.

The WBC was 12,000/cu mm with 78% polys, 20% lymphocytes, and 2% monocytes; throat culture was negative for β-hemolytic *Streptococcus*. The clinical impression was lingual tonsillitis, which was treated with oral penicillin with good results. Since this was the patient's first episode of lingual tonsillitis, she will be a candidate for operation only if the disorder recurs.

Case 3. A 41-year-old white woman had had a sore throat with constant fullness and discomfort for one week, without fever, chills, cough, ear pain, or a postnasal drip. She had had a tonsillectomy as a child, and she admitted to having had previous sore throats, but none had been severe enough to seek medical attention.

Physical examination showed a well nourished woman in no acute distress. Blood pressure was 130/80 mm Hg, pulse 82 beats/min, temperature 98.8 F (37.1 C), and respirations 15/min. The throat was erythematous, and the palatine tonsils were absent. There was a whitish exudate covering a somewhat raised area on the dorsal surface of the tongue posterior to the vallate papillae. The patient was able to protrude the tongue, and no induration or fluctuation could be seen. There was no lymphadenopathy and no stridor could be heard. The remainder of the examination yielded normal findings.

The clinical impression was lingual tonsillitis, which was treated with oral penicillin with good results. The lingual tonsil in this patient was small and may eventually enlarge. Medical treatment and follow-up is the treatment of choice.

DISCUSSION

Acute Lingual Tonsillitis

The lingual tonsil may be the seat of acute or recurrent episodes of tonsillitis that may be either exudative or follicular. The severity varies with the size of the tonsil and the virulence of the organism. The responsible organism may be β-hemolytic *Streptococcus,* and cultures should be done. Suprahyoid pain and otalgia may be present. Palpation with a gloved finger is adequate to detect induration or fluctuation.

Use of antibiotics including penicillin is helpful in resolving acute episodes, but frequent recurrence is best treated by lingual tonsillectomy. This procedure was made easier with the advent of cryosurgery and the CO_2 laser with sharp dissection. In the series reported by Joseph et al,[3] most of the patients had successful surgical removal without tracheotomy, a complication that once discouraged surgical removal.

Benign Lingual Hypertrophy

Most patients reported with hypertrophy of the lingual tonsils have had tonsillectomy or adenoidectomy during childhood, which may result in compensatory hypertrophy or repeated inflammatory episodes.[4] The hypertrophy is variable and may be unilateral or bilateral. The common symptoms are chronic cough when the patient is in the supine position, intermittent sore throat, pain around the hyoid bone, and episodic hoarseness. A constant tickling or persistent discomfort in the throat may also occur. The symptoms may be labeled as psychosomatic or as a result of globus hystericus. Lymphatic hypertrophy may obstruct the mucus gland ducts and produce retention cysts, some of which may become secondarily infected. Olsen et al[5] reported that sleep apnea syndrome could result from such benign enlargement. An enlarged lingual tonsil may irritate the sensitive posterior pharyngeal wall and cause coughing when the patient is supine, as in our first case.

Lingual tonsillectomy is reserved for patients with recurrent or constant symptoms that probably result from enlarged lymphoid tissue.

Foreign Body Within a Lingual Tonsil

Lingual tonsillitis may result from impaction of a foreign body such as a small bristle, a fish bone, or other sharp object. Further enlargement of the tissue caused by secondary infection may obscure a small object from view. Since the patient may or may not remember swallowing a foreign body,

careful palpation should be done whenever possible. The patient should be reevaluated after treatment, since failure to do so may result in recurrence of infection or even abscess formation.

Lingual Abscess

Lingual tonsillitis may develop into an abscess involving the tongue or floor of the mouth. Signs and symptoms of lingual abscess include asymmetric enlargement of the tonsil, glossal pain, hoarseness, inability to protrude the tongue, and a clinical appearance of toxicity. Such a combination of symptoms may occur in Ludwig's angina,[6] but in the presence of lingual tonsillar tissue, a lingual abscess is more likely. Hospitalization is necessary to secure the airway and drain the abscess under general anesthesia. Parenteral antibiotics are also indicated. If undiagnosed or inadequately treated, this complication is potentially fatal.

Lingual Thyroid

A midline fleshy mass in the region of the foramen cecum may be an aberrant thyroid rather than a lingual tonsil. It may be small, or large enough to produce obstructive symptoms. Besides its midline location, there is no characteristic appearance of an ectopic lingual thyroid. The tissue is subject to the complications of both a hypertrophied lingual tonsil and a thyroid gland. In 70% of cases, the lingual thyroid may be the only functioning thyroid tissue,[7] which can be confirmed by thyroid scan. The size of the ectopic thyroid gland can be reduced by thyroid hormones, but the results are slow.[8] If it is small and the patient is asymptomatic, the lingual thyroid should be left alone. Since neoplastic changes may occur, an ulcerated or indurated mass with or without lymphadenopathy should be evaluated by biopsy. Autotransplantation of lingual thyroid tissue into the rectus muscles of the anterior abdominal wall has been done successfully by Swan et al[9] and Lawson[10] in patients with obstructive symptoms. Close monitoring of thyroid function is indicated regardless of the treatment method.

Other Causes of Lingual Masses

In addition to enlargement of tonsillar lymphoid tissue, a mass on the dorsal surface of the tongue may be a thyroglossal cyst, dermoid cyst, varicosities, lymphangioma, angioma, adenoma, fibroma, papilloma, malignant lymphoma, squamous cell carcinoma, minor salivary gland tumor, or a mucus retention cyst. A symmetric appearance with a midline division suggests benign lingual tonsillar hypertrophy. A thyroglossal cyst is a midline structure in the region of the foramen cecum. Presence of ulceration or induration with or without adenopathy is an indication for biopsy to rule out neoplastic change.

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