

UCLA

UCLA Previously Published Works

Title

Transnasal Esophagoscopy and the Diagnosis of a Mediastinal Foregut Duplication Cyst

Permalink

<https://escholarship.org/uc/item/3sh1t5j6>

Journal

Ear, Nose & Throat Journal, 92(8)

ISSN

0145-5613

Authors

Gill, Amarbir S
Long, Jennifer L

Publication Date

2013-08-01

DOI

10.1177/014556131309200805

Peer reviewed

Transnasal esophagoscopy and the diagnosis of a mediastinal foregut duplication cyst

Amarbir S. Gill, BS; Jennifer L. Long, MD, PhD

A 61-year-old asymptomatic man was referred to the otolaryngology clinic at UCLA with a left paratracheal mass. The lesion had been found incidentally when the patient had undergone ultrasound to evaluate his carotid arteries. He denied any change in voice, dysphagia, shortness of breath, weight loss, or fevers.

Upon physical examination, the patient had normal voice quality, normal vocal fold mobility, and no neck masses or lymphadenopathy. Transnasal esophagoscopy (TNE) revealed a smooth compression of the left anterior wall of the esophagus superior to the aortic pulsation, mildly narrowing the esophageal lumen (figure 1). Computed tomography (CT) of the neck and chest revealed a lesion approximately 5 cm in diameter located between the trachea and esophagus (figure 2); however, the lesion did not directly involve either of these structures.

Based on the constellation of imaging findings, a presumptive diagnosis of bronchogenic cyst was made, given the separation of the cyst from the esophageal wall; however, in the absence of histology, the differential diagnosis included esophageal duplication cyst.

Foregut duplication cysts are true mucus-filled cysts lined with a thin epithelial layer, arising from either bronchogenic, esophageal, or neuroenteric precursor tissue; the cysts can be differentiated from one another histologically by the identification of the tissue-specific epithelial phenotype. A rare entity, the foregut duplication cyst most often has been identified within the pediatric population. It presents most commonly with respiratory distress and feeding difficulty in infants. Although uncommon, lesions may be discovered in older adults (age >60 years) either incidentally or as a result of newly developing symptoms, including

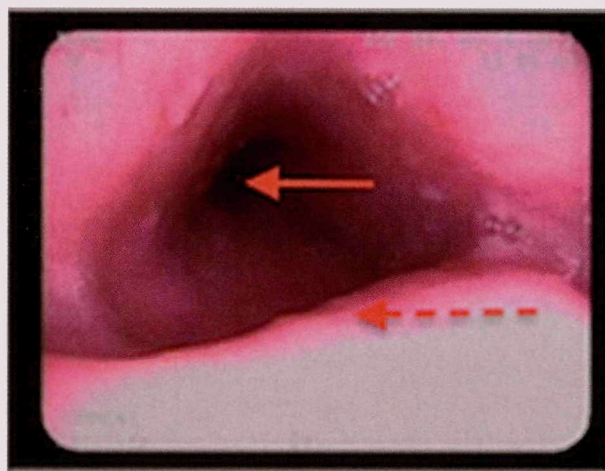


Figure 1. TNE reveals marked smooth-muscle compression of the esophagus (broken arrow) caused by the protruding mediastinal mass. The esophageal lumen is visible (solid arrow).

chest pain, cough, dysphagia, dyspnea, hoarseness, or weight loss.¹⁻³

The differential diagnosis for a compressive mediastinal mass is fairly extensive; it includes developmental cysts (i.e., bronchogenic, enteric, and pericardial cysts), neurogenic tumors, thymomas, lymphomas, germ cell tumors, endocrine (i.e., thyroid and parathyroid) pathologies, large vessel aneurysms, and mesenchymal tumors.⁴

To the best of our knowledge, this is the first report in the otolaryngology literature to demonstrate the utility of awake, office-based esophagoscopy in outlining the size, location, and degree of esophageal compression caused by such a mass. In the absence of preexisting imaging, such findings on TNE would prompt further evaluation with CT or magnetic resonance imaging.

From George Washington University School of Medicine, Washington, D.C. (Mr. Gill); and the Department of Head and Neck Surgery, University of California, Los Angeles (Dr. Long).

INDICATIONS AND USAGE

PATADAY[®] solution is indicated for the treatment of ocular itching associated with allergic conjunctivitis.

CONTRAINDICATIONS

None.

WARNINGS

For topical ocular use only. Not for injection or oral use.

PRECAUTIONS

Information for Patients

As with any eye drop, to prevent contaminating the dropper tip and solution, care should be taken not to touch the eyelids or surrounding areas with the dropper tip of the bottle. Keep bottle tightly closed when not in use. Patients should be advised not to wear a contact lens if their eye is red.

PATADAY[®] (olopatadine hydrochloride ophthalmic solution) 0.2% should not be used to treat contact lens related irritation. The preservative in PATADAY[®] solution, benzalkonium chloride, may be absorbed by soft contact lenses. Patients who wear soft contact lenses and whose eyes are not red, should be instructed to wait at least ten minutes after instilling PATADAY[®] (olopatadine hydrochloride ophthalmic solution) 0.2% before they insert their contact lenses.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Olopatadine administered orally was not carcinogenic in mice and rats in doses up to 500 mg/kg/day and 200 mg/kg/day, respectively. Based on a 40 µL drop size and a 50 kg person, these doses were approximately 150,000 and 50,000 times higher than the maximum recommended ocular human dose (MROHD). No mutagenic potential was observed when olopatadine was tested in an *in vivo* bacterial reverse mutation (Ames) test, an *in vivo* mammalian chromosome aberration assay or an *in vivo* mouse micronucleus test. Olopatadine administered to male and female rats at oral doses of approximately 100,000 times MROHD level resulted in a slight decrease in the fertility index and reduced implantation rate; no effects on reproductive function were observed at doses of approximately 15,000 times the MROHD level.

Pregnancy

Teratogenic effects: Pregnancy Category C

Olopatadine was found not to be teratogenic in rats and rabbits. However, rats treated at 600 mg/kg/day, or 150,000 times the MROHD and rabbits treated at 400 mg/kg/day, or approximately 100,000 times the MROHD, during organogenesis showed a decrease in live fetuses. In addition, rats treated with 600 mg/kg/day of olopatadine during organogenesis showed a decrease in fetal weight. Further, rats treated with 600 mg/kg/day of olopatadine during late gestation through the lactation period showed a decrease in neonatal survival and body weight.

There are, however, no adequate and well-controlled studies in pregnant women. Because animal studies are not always predictive of human responses, this drug should be used in pregnant women only if the potential benefit to the mother justifies the potential risk to the embryo or fetus.

Nursing Mothers

Olopatadine has been identified in the milk of nursing rats following oral administration. It is not known whether topical ocular administration could result in sufficient systemic absorption to produce detectable quantities in the human breast milk. Nevertheless, caution should be exercised when PATADAY[®] (olopatadine hydrochloride ophthalmic solution) 0.2% is administered to a nursing mother.

Pediatric Use

Safety and effectiveness in pediatric patients below the age of 2 years have not been established.

Geriatric Use

No overall differences in safety and effectiveness have been observed between elderly and younger patients.

ADVERSE REACTIONS

Symptoms similar to cold syndrome and pharyngitis were reported at an incidence of approximately 10%. The following adverse experiences have been reported in 5% or less of patients:

Ocular: blurred vision, burning or stinging, conjunctivitis, dry eye, foreign body sensation, hyperemia, hypersensitivity, keratitis, lid edema, pain and ocular pruritus.

Non-ocular: asthenia, back pain, flu syndrome, headache, increased cough, infection, nausea, rhinitis, sinusitis and taste perversion.

Some of these events were similar to the underlying disease being studied.

DOSAGE AND ADMINISTRATION

The recommended dose is one drop in each affected eye once a day.

HOW SUPPLIED

PATADAY[®] (olopatadine hydrochloride ophthalmic solution) 0.2% is supplied in a white, oval, low density polyethylene DROP-TAINER[®] dispenser with a natural low density polyethylene dispensing plug and a white polypropylene cap. Tamper evidence is provided with a shrink band around the closure and neck area of the package.

NDC 0065-0272-25

2.5 mL fill in 4 mL oval bottle

Storage

Store at 2°C to 25°C (36°F to 77°F)

U.S. Patents Nos. 5,641,805; 6,995,186; 7,402,609

Rx Only

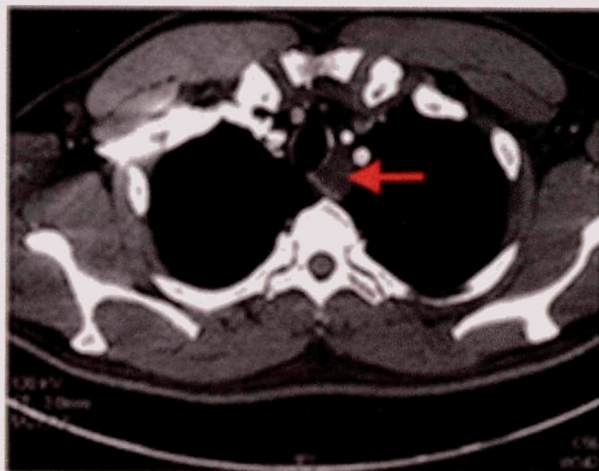


Figure 2. CT scan without contrast shows the esophageal compression (arrow) caused by a left paratracheal mass.

Moreover, our case diverges from most documented cases of foregut duplication cysts insofar as observation of the lesion was undertaken rather than excision.

Excision of the cyst is usually recommended because serious complications may occur if it is left untreated, including malignancy.² However, it was recently demonstrated that the potential complications from excision of the cysts, including perforation and consequent infection, may outweigh the low risk of potential malignancy, further supporting observation in asymptomatic adults.^{1,5}

References

1. Ferraro P, Martin J, Duranceau AC. Foregut cysts of the mediastinum. In: Shields TW, LoCicero J III, Reed CE, Feins RH (eds). General Thoracic Surgery. 7th ed. Philadelphia: Lippincott Williams & Wilkins; 2009:2519-29.
2. Kieran SM, Robson CD, Nosé V, Rahbar R. Foregut duplication cysts in the head and neck: Presentation, diagnosis, and management. Arch Otolaryngol Head Neck Surg 2010;136(8):778-82.
3. Lee DH, Park CK, Kum DY, et al. Clinical characteristics and management of intrathoracic bronchogenic cysts: A single center experience. Korean J Thorac Cardiovasc Surg 2011;44(4):279-84.
4. Park DR, Vallières E. Tumors and cysts of the mediastinum. In: Mason RJ, Murray JF, Nadel JA, et al (eds). Murray and Nadel's Textbook of Respiratory Medicine. 5th ed. Philadelphia: Saunders Elsevier; 2010:1822-32.
5. Kirmani B, Kirmani B, Sogliani F. Should asymptomatic bronchogenic cysts in adults be treated conservatively or with surgery? Interact Cardiovasc Thorac Surg 2010;11(5):649-59.

Alcon

a Novartis company

© 2013 Novartis 5/13 PAT1313LJAD

Copyright of ENT: Ear, Nose & Throat Journal is the property of Vendome Group LLC and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.