

Four case of esophageal diverticulum presented as incidentally discovered asymptomatic posterior thyroid nodules

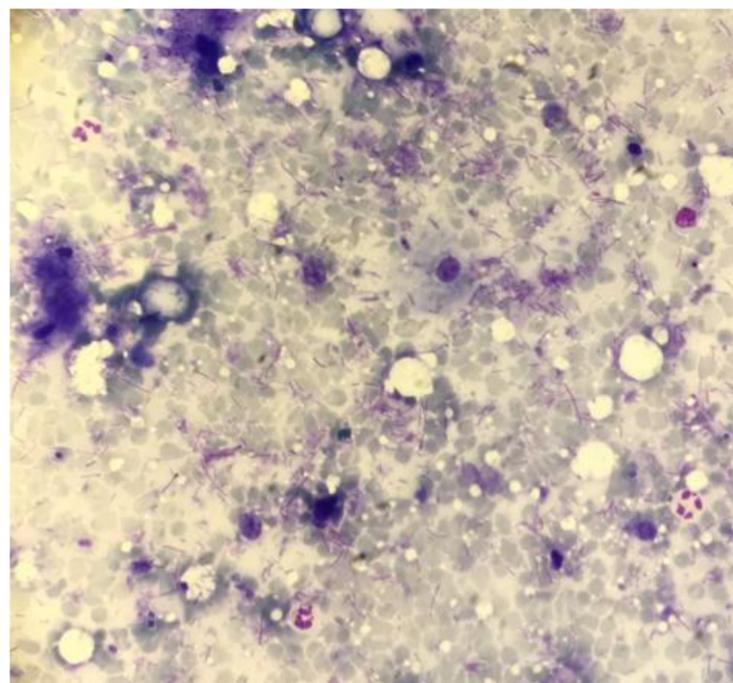
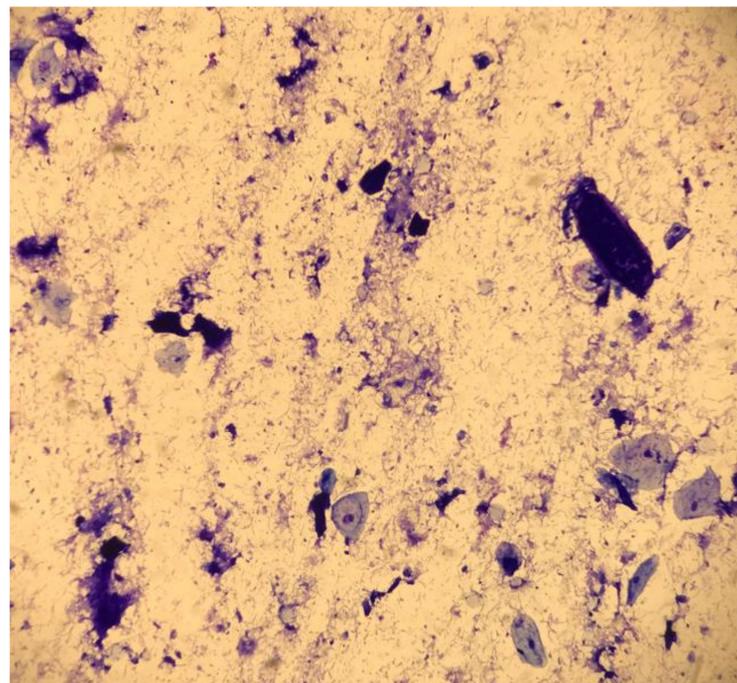
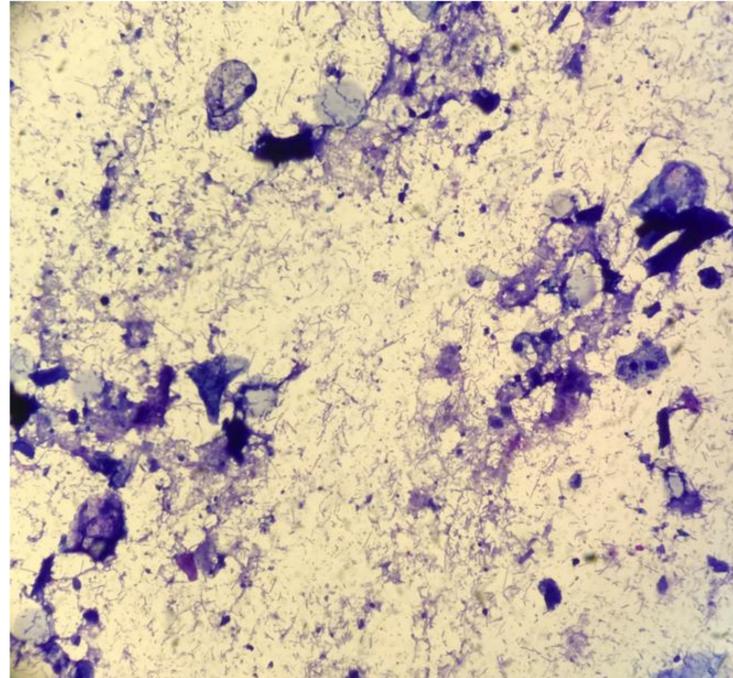
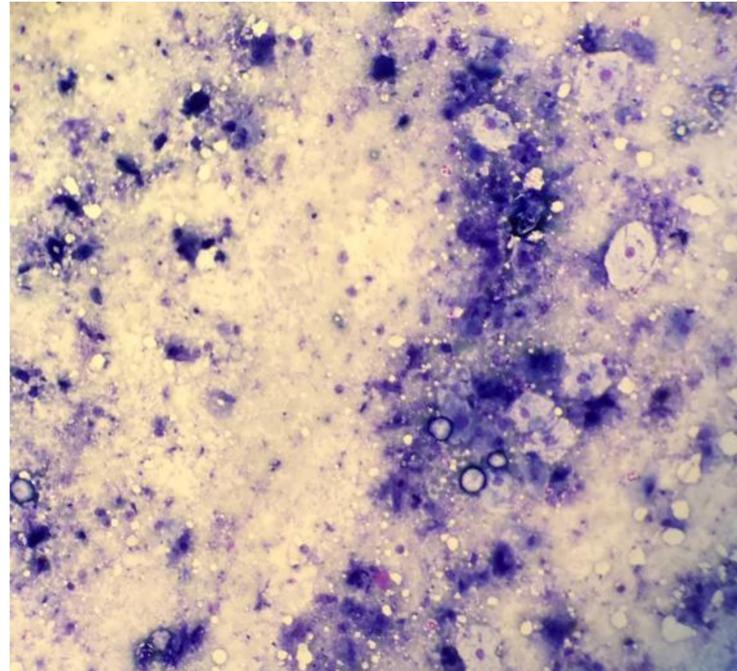
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INTRODUCTION

Fine-needle aspiration (FNA) detecting oropharyngeal contents in the thyroid is highly unusual. Oropharyngeal diverticula develop due to outpouchings of the wall of the hypopharynx or cervical esophagus at the site of anatomic muscle weakness and can present highly rarely as a solitary thyroid nodule. Zenker diverticulum is commonly known and recognized, which develops in the posterior wall. An another uncommon Killian-Jamieson diverticulum develops in the anterolateral wall of the cervical esophagus.

CASE REPORT:

Here we reported 4 case of esophageal diverticula which presented as asymptomatic thyroid nodules in 4 patients (one 85yo female, one 85yo male, one 57yo male and one 26yo female) who underwent ultrasound-guided FNA. The FNA findings include bland mature nonkeratinizing superficial squamous cells, plenty filamentous bacteria/yeast, amorphous debris and scattered degenerated chronic



inflammatory cells, consistent with oral pharyngeal contents. The presence of oral pharyngeal contents in the thyroid FNA biopsy may raise differential diagnoses including Zenker diverticulum and Killian-Jamieson diverticulum of the esophagus, thyroglossal duct fistula and a third or fourth branchial fistula,

although benign epidermoid inclusion cyst is also a differential diagnosis. Thyroglossal duct fistula appears at midline, and branchial fistula usually present in the pediatric patients (unusually seen in adults). However, all 4 cases were reviewed with radiologists and confirmed as deep posterior thyroid nodules. The squamous epidermoid inclusion cyst is usually superficial and has very few well-preserved nucleated squamous cells. The abundant filamentous bacteria/yeast may represent colonization but no infection, which is confirmed by almost absence of neutrophils. So, the final diagnosis of all 4 cases are esophageal diverticulum and no surgical treatment is necessary. There is no evidence of malignancy; however, the false negative rate of FNA diagnosis in a squamous related entity is reported to be about 5%, so these patients are deemed appropriate follow-up.

KEY REFERENCES:

1. Rekhman N, Rekhman K, Sheth S, Ali SZ. A 62-year-old woman with a suspected thyroid nodule. Arch Pathol Lab Med. 2005 Nov;129(11):1497-8.
2. Stewart KE, Smith DRK, Woolley SL. Simultaneously occurring Zenker's diverticulum and Killian-Jamieson diverticulum: case report and literature review. J Laryngol Otol. 2017;131(8):661-666.