

CASE PRESENTATION

- 53 year-old female presented with 2 years duration of chronic epigastric pain and heartburn. Physical examination and laboratory tests were within normal limits.
- The patient worked as a nail technician by a horse race track. Otherwise, she had no direct contact with animals.
- Initial endoscopy showed slight granularity in the distal esophagus and superficial erosions at the antrum. Biopsies were consistent with reflux esophagitis and erosive gastritis with intestinal metaplasia. *Helicobacter pylori* was negative.
- Six months later, gastric mapping was done for intestinal metaplasia to rule out dysplasia. Biopsies showed acute on chronic erosive gastritis without evidence of dysplasia. *H. pylori* was negative.
- There was an incidental finding of numerous 1-2 mm adherent white plaques from the mid-esophagus to the gastro-esophageal junction (Figure 1A).
- Brush cytology was sent to rule out *Candida*; it revealed *Dermatophilus congolensis* (Figure 1B). Culture confirmed the cytology findings.
- Primary care doctor started triple therapy for *H. pylori* at this time and there was rapid resolution of symptoms within 2 weeks.
- Two weeks after completing therapy, repeat endoscopy showed progression of the white plaques to now diffusely involve the entire esophagus. Again, the brush cytology was consistent with *D. congolensis*.
- The patient was subsequently lost to follow up. Care was reestablished 1 year later. At that time, the patient had quit her job for 6 months.
- Repeat endoscopy showed complete resolution of white plaques (not shown).

DIAGNOSTIC IMAGING

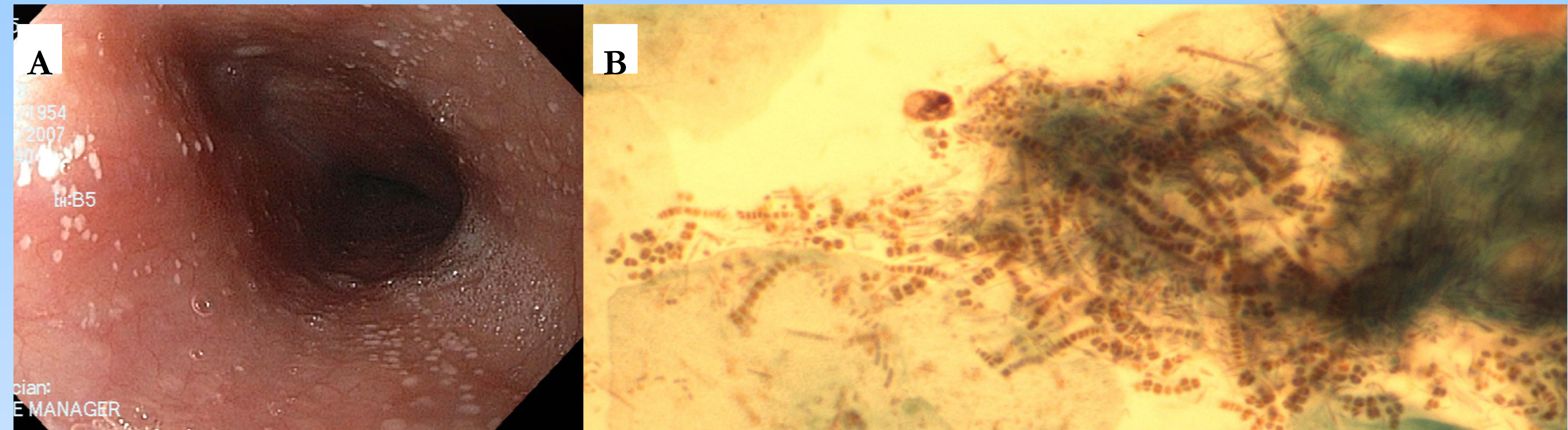


Figure 1. A) Esophagoscopy showing numerous 1-2 mm white plaques at the mid-esophagus that were adherent. B) Brush cytology with Papanicolaou stain showing organisms consistent with *D. congolensis*, with filamentous, septated hyphae and coccoid forms.

Dermatophilus congolensis^{1,2}

- *Dermatophilus congolensis* is a well known skin pathogen in animals, and more rarely, in humans with direct exposure.
- It is a facultative anaerobe in the order *Actinomycetales*.
- It infects the keratinized tissue, and causes epidermitis with exudative response and pus formation.
- The infection is generally self-limited in humans, and the lesions gradually regress with time.
- Chronic nodular and recurrent forms are also recognized.
- Mode of infection is via direct transfer, though mediation via ectoparasites is also hypothesized.
- It is sensitive *in vitro* to variety of antibiotics, including penicillin, macrolides and tetracycline.
- Treatment can be attempted, but is limited by the nature of the infection: topicals do not penetrate into the deeper epidermis, and the systemic therapy do not reach into the relatively avascular upper epidermis.

REFERENCES

- Burd EM, Juzych LA, Rudrik JT, Habib F. Pustular dermatitis caused by *Dermatophilus congolensis*. J Clin Microbiol. 2007 May;45(5):1655-8.
 Zaria LT. *Dermatophilus congolensis* infection (Dermatophilosis) in animals and man! An update. Comp Immunol Microbiol Infect Dis. 1993 Jul;16(3):179-222.
 Bunker ML, Chewning L, Wang SE, Gordon MA. *Dermatophilus congolensis* and "hairy" leukoplakia. Am J Clin Pathol. 1988 May;89(5):683-7.

DISCUSSION

- The only other reported case of mucosal infection presented as leukoplakia.
- The patient did not have direct contact with animals, but her job as a nail technician was by a horse race track. The mode of infection is thus hypothesized:
 - Inhaled and swallowed contaminated air or fragmented nails of horse handlers that may have inoculated the esophagus.
 - The existing reflux esophagitis may have facilitated the progression to infection.
- The patient had progression of infection despite 2 weeks of antibiotic therapy for *H. pylori*. The patient did not have any associated symptoms.
 - Systemic antibiotics are limited in their penetration to the lesion.
 - Also, the duration of treatment may have been inadequate.
- The patient had spontaneous resolution after she quit her job.
 - The resolution may simply represent the natural course of the infection.
 - It also maybe that the repeated exposure is important to maintain the ongoing infection.