Images in Clinical Tropical Medicine

Nasal Fish Tank Granuloma: An Uncommon Cause for Epistaxis

Wan-Ling Ho, Wen-Yu Chuang, An-Jing Kuo, and Kai-Chieh Chan*

Department of Pediatrics, Shin Kong Wu Ho-Su Memorial Hospital, Taipei, Taiwan; Fu Jen School of Medicine, Catholic University, New Taipei City, Taiwan; Department of Pathology, Chang Gung Memorial Hospital and Chang Gung University, Linkou, Taiwan; Department of Medical Biotechnology and Laboratory Science, Chang Gung Memorial Hospital, Linkou, Taiwan; Department of Otolaryngology, Chang Gung Memorial Hospital and Chang Gung University, Linkou, Taiwan

An immunocompetent 28-year-old male aquarium store employee presented with 1 month of intermittent epistaxis. A bleeding granulomatous lesion was identified over the right nasal septum (Figure 1). Histopathology from the incisional biopsy revealed granulomatous inflammation with the presence of acid-fast bacilli (Figure 2). Culture of the homogenized specimen on Middlebrook 7H11 agar after 14 days displayed white clones of non-tuberculous *Mycobacterium* (NTM) that turned brilliant yellow upon light exposure (Figure 3). Polymerase chain reaction (PCR) amplification of the 65-kDa heat shock protein gene with restriction enzyme analysis using *Bst*E II and *Hae* III confirmed the diagnosis of *Mycobacterium marinum* infection. The lesion regressed completely with 3 months of doxycycline treatment.

Fish tank granuloma is a rare granulomatous skin infection caused by *Mycobacterium marinum*, an opportunistic NTM, commonly found in aquatic environments.¹ Extremities are most frequently affected; nasal cavity infection is seldom

FIGURE 2. Histopathology of the specimen disclosed acid-fast bacilli (arrow) with the granulation inflammation.

FIGURE 1. Anterior rhinoscopy revealed a granulomatous lesion with active oozing (arrow) on the right nasal septum. Inferior turbinate was identified as an asterisk.

reported. The diagnosis is generally based on a history of aquatic exposure (occupational or recreational), histopathology of granulomatous inflammation with or without the presence of acid-fast bacilli, and a slow-growing photochromogenic NTM incubated at low temperature (28–30°C). Furthermore, PCR facilitates an early identification of *Mycobacterium marinum* infection. Superficial lesion sometimes resolves spontaneously, but several months of antimicrobial drug are usually necessary. Various monotherapies, including doxycycline, are effective.²

FIGURE 3. *Mycobacterium marinum* clones on Middlebrook 7H11 agar plates showed the photochromogenic characteristic, which are white when grown in the dark (A) and turn a brilliant yellow soon after exposure to light (B).

* Address correspondence to Kai-Chieh Chan, Division of Otolaryngology Head and Neck Surgery, Chang Gung Memorial Hospital and Chang Gung University, Taoyuan, Taiwan 5, Fu-Shin Street, Kweishan Taoyuan 333, Taiwan. E-mail: kjchan5109@gmail.com

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Authors' addresses: Wan-Ling Ho, Department of Pediatrics, Shin Kong Wu Ho-Su Memorial Hospital, Taipei, Taiwan & Fu Jen School of Medicine, Catholic University, New Taipei City, Taiwan, E-mail: santho@gmail.com. Wen-Yu Chuang, Department of Pathology, Chang Gung Memorial Hospital and Chang Gung University, Linkou, Taiwan, E-mail: chuang.taiwan@gmail.com. An-Jing Kuo, Department of Medical Biotechnology and Laboratory Science, Chang Gung Memorial Hospital, Linkou, Taiwan, E-mail: anjing@cgmh.org.tw. Kai-Chieh Chan, Department of Otolaryngology, Chang Gung Memorial Hospital and Chang Gung University, Linkou, Taiwan, E-mail: kjchan5109@gmail.com.

Reprint requests: Kai-Chieh Chan, Division of Otology, Department of Otolaryngology Head and Neck Surgery, Chang Gung Memorial Hospital and Chang Gung University, Taoyuan, Taiwan 5, Fu-Shin Street, Kweishan Taoyuan 333, Taiwan, E-mail: kjchan5109@gmail.com.

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