Iron-induced esophageal ulceration

Esophageal inflammation or ulceration is a well recognized side-effect of some oral medications, especially nonsteroidal anti-inflammatory or potassium chloride tablets. A similar injury can be induced by iron but endoscopically detected lesions are rarely reported [1,2]. An 82-year-old woman presented a sudden complaint of dysphagia after ingestion of a ferrous sulphate tablet. She had chronic esophageal reflux and Raynaud’s syndrome. Her physical examination was normal.

An upper endoscopy revealed a black-brown, ulcerated and necrotic lesion, just below the upper esophageal sphincter, 2 cm in length, well circumscribed and associated with a slight stenosis. Below the lesion the esophageal lumen was distented and atonic, with candidiasis and a grade D peptic esophagitis (Fig. 1).

Histological evaluation revealed ulcerated esophagitis, with acute inflammatory granulation tissue containing abundant brown crystalline nonbirefringent material, confirmed as iron by Perl’s staining (Fig. 2). Other stainings for brown pigments and infections were negative. The patient’s iron tablets were stopped and a high dose proton pump inhibitor was prescribed. The dysphagia was relieved and a repeat upper endoscopy revealed progressive resolution of the necrosis and stenosis (Fig. 4). Iron-induced esophageal erosions or ulcerations are seldom described and the differential diagnoses might be striking.

Video 1
Upper endoscopy at day 1 revealed a black-brown, ulcerated and necrotic lesion, just below the upper esophageal sphincter.

Video 2
Upper endoscopy at day 8 showing the progressive resolution of the lesion with a circumferential brown-pigmented lesion with no necrosis or stenosis.

Treatment requires stopping the offending drug or, if iron is still necessary, changing to a liquid preparation [3,5]. Iron-induced lesions are not endoscopically specific and histological investigation is essential to the diagnosis.

Endoscopy_UCTN_Code_CCL_1AB_2AC_3AZ

M. Areia1, R. Gradiz2, P. Souto1, E. Camacho1, M. R. Silva1, N. Almeida1, A. Rosa1, M. F. Xavier da Cunha1, M. C. Leitão1
1 Department of Gastroenterology, Coimbra University Hospital, Coimbra, Portugal
2 Department of Pathology, Coimbra University Hospital, Coimbra, Portugal

References
1 Abbarah TR, Fredell JE, Ellenz GB. Ulceration by oral ferrous sulfate. JAMA 1976; 236: 2320

Bibliography
Endoscopy 2007; 39: E326 © Georg Thieme Verlag KG Stuttgart · New York · ISSN 0013-726X

Corresponding author
M. Areia, MD
Department of Gastroenterology
Coimbra University Hospital
3000-075 Coimbra
Portugal
Fax: +351-239-701517
miguel.areia@netcabo.pt