

JBR–BTR, 2013, 96: 72-74.

## GIANT IDIOPATHIC ULCER OF ESOPHAGUS IN THE CONTEXT OF ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)

C.A. Dragean<sup>1</sup>, I. Bogdan<sup>1</sup>, K. Azzouzi<sup>2</sup>, L.Goncette<sup>1</sup>

**The giant ulcer of esophagus is a rare entity in the context of human immunodeficiency syndrome. In front of this type of ulceration the radiologist must to distinguish between two types of ulcers HIV, cytomegalovirus (CMV). The differential diagnosis is necessary for orientation of the therapy and is the result of association between radiological, endoscopic and pathological findings.**

**Key-words:** Acquired immunodeficiency syndrome (AIDS) – Peptic ulcer.

Acquired immunodeficiency syndrome is associated with digestive manifestations, especially at the level of esophagus, and the principal clinical symptom is odynophagia. The diagnosis of this entity is an association between three techniques: radiological, endoscopic and pathological. The radiological findings give an etiological orientation. The endoscopy confirms the radiological aspects and allows the simple biopsy or brushing. The final diagnosis and the type of esophageal ulcers are confirmed by the pathological exam.

### Case report

A 28-year-old male patient known with AIDS (the disease was diagnosed at the age 13 years, with a vertical transmission) and treated for recurrent oral ulcerations. The patient was admitted in our institution for severe ulcero-necrotic stomatitis, pansinusitis and inflammatory syndrome. After the therapy the patient described the persistence of odynophagia and dysphagia.

The radiological exploration started with an enhanced CT of the thorax. On the mediastinal window, we identified a structure presenting a digestive wall and containing air situated at the level of posterior mediastinal floor on the right side of the middle segment of thoracic esophagus (Fig. 1). This structure was interpreted like a parietal thickening of the esophagus with probably ulceration (Fig. 2).

The esophagography confirmed the presence of a single giant ulcer, with the topography at the level of



Fig. 1. — Axial contrast-enhancement CT scan reveals digestive structure (U) on the right side of esophagus (E).

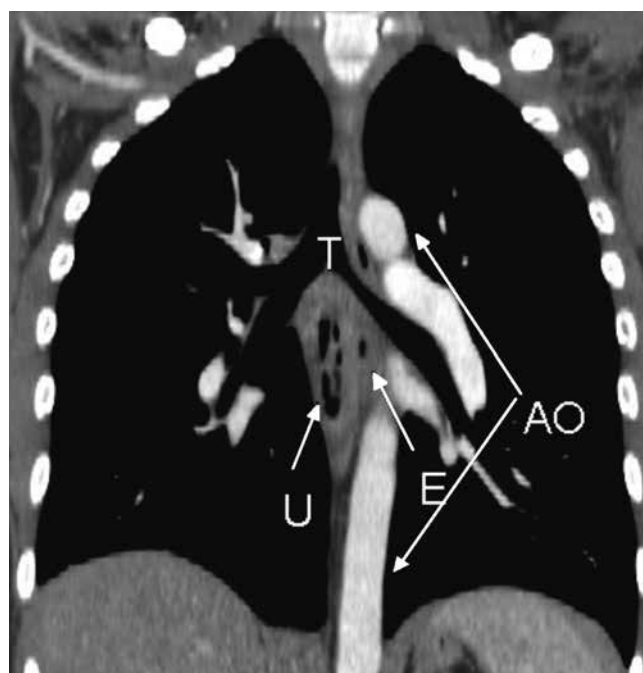


Fig. 2. — Coronary reconstruction enhanced CT scan – ulceration U (inferior of tracheal bifurcation T) and esophagus E (between ulceration and the aorta AO).

From: 1. Department of Radiology, 2. Department of Gastroenterology, Université Catholique de Louvain, Cliniques Universitaires Saint Luc, Brussels, Belgium.  
Address for correspondence: Dr C. Dragean, M.D., Department of Radiology, Université Catholique de Louvain, Cliniques Universitaires Saint Luc, Avenue Hippocrate 10, B-1200 Brussels, Belgium.



Fig. 3. — Esophagogram shows a giant ulcer on the middle esophagus with the rim of oedema.

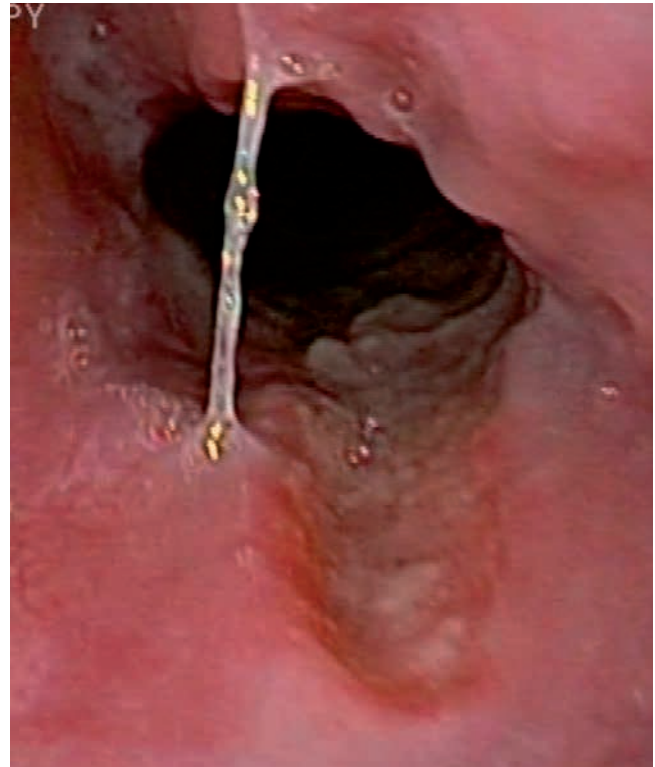


Fig. 4. — Endoscopic image of esophagus – giant profound posterior ulcer.

postero-lateral wall of middle thoracic esophagus. This ulcer has an oval shape and measure 10 cm on the long axis. The deep part of the ulceration was irregular and on the periphery was surrounded by a radiolucent rim which represents the oedema (Fig. 3).

The diagnosis suggested by the radiologist is giant idiopathic esophageal ulcer related with the HIV status versus infectious ulcer caused by cytomegalovirus (CMV).

These radiological findings were correlated with the endoscopic views, which demonstrated the presence of ulcers of esophagus (Fig. 4), one very large.

The endoscopic examination was completed with the biopsy and the histological exams. The biopsies indicated the presence of epithelium of Malpighi with the inflammatory reaction and at the level of ulceration the presence of a fibrous membrane associated with an inflammatory infiltration. The coloration PAS and the immuno-histochemical tests (for CMV and herpes virus) were negatives.

The final diagnosis after the correlation between the three techniques was idiopathic giant ulcer of esophagus related with the HIV status.

### Discussion

The symptom of odynophagia (painful swallowing) at the HIV patients associated with the maculopapular rash with the topography on the face, superior part of the trunk and the upper limbs (1, 2), with the ulceration at the level of oral cavity and the pharynx and rarely with the hematemesis, are the elements of acute digestive syndrome in AIDS. These manifestations are correlated with a long term evolution or a sero-conversion syndrome (3, 4).

This syndrome and the radiological finding impose the differential diagnosis between multiples etiological factors, which can be divided in two groups: infectious esophagitis and non-infectious esophagitis. The non-infectious esophagitis are represented by: drug-induced esophagitis, radiation-induced esophagitis, eosinophilic esophagitis, Crohn disease of the esophagus, tuberculosis, graft-versus-host disease, "mechanical" esophagitis (nasogastric intubation).

In the group of infectious esophagitis are included (5, 6): giant idiopathic esophageal ulcer in the HIV patient (HIV esophagitis), cytomegalovirus esophagitis (CMV

esophagitis), herpes esophagitis and candida esophagitis. The first two entities of this group are the principal's differentials diagnosis on the HIV patient with acute digestive syndrome.

The radiological findings in the infectious esophagitis are:

#### *HIV esophagitis*

Single giant ulcer (5-10 cm) or multiples ulcers one or more are giant and the others smallest, with the topography on the middle segment of thoracic esophagus. On the esophagogram we will identified one or more ulcers, the giant ulcer is profound with the oval shape and surrounded by rim of oedema.

#### *Cytomegalovirus esophagitis*

On this type of infectious esophagitis at the patient with AIDS the esophagography demonstrated the presence of multiples ulcers, one or mores are large (2-5 cm), superficial (7), with the topography on the distal thoracic esophagus or at the level eso-gastric junction.

#### *Herpes esophagitis*

The herpes simplex is another cause of infectious esophagitis at the

Table I. – Differential diagnosis of infectious esophagitis.

	HIV	CMV	HERPES VIRUS	CANDIDA ALBICANS
<b>Topography</b>	Middle T. ES.	Inferior T. ES. +/- GO junction	Superior ES	Superior and middle T. ES.
<b>Number of lesion</b>	Single or Multiples	Multiples	Multiples	Multiples
<b>Dimension</b>	Giant (5-10 cm)	Giant (3-5 cm) +/- smalls	Smalls	Smalls
<b>Shape</b>	Oval	Oval	Oval or round	Linear, with the longitudinal disposition
<b>Depth</b>	Profound	Superficial	Superficial	Superficial

**Note:** – ES: Esophagus  
– T. ES: Thoracic esophagus  
– GO junction: Gastro-esophageal junction.

patients immuno-compromised. On the radiological exam we find multiples small superficial ulcers at the level of superior esophagus.

#### *Candida esophagitis*

Double-contrast esophagogram shows multiples discrete plaque-like longitudinal lesions separated by the normal mucosa on the superior and middle esophagus.

In Table I are indicated the criteria of radiological differential diagnosis between these four types of esophagitis, these criteria confirm radiological diagnosis for our patient.

In all the cases of ulcers of esophagus this radiological aspects must to be confirmed by endoscopic exam associated with biopsies, brushing and histo-pathological and immunological exams.

The study of Wilcox (8) described the endoscopic characteristics for the idiopathic esophageal ulcer (IEU): -more than 1 ulceration, for the majority the greatest dimension were > 1 cm, and in the 34% were > 2 cm, localisation in the middle oesophagus is dominant and the second place is for the distal oesophagus, the majority of the lesions was superficial or intermediate in the

depth, and the profound ulcerations were found in 7% of the cases.

#### **Conclusion**

The odynophagia associated with the giant esophageal ulcers is an entity which was described and recognized at the HIV patients and needs the differentiation between HIV esophagitis and CMV esophagitis. The presence of maculo-papular rash on the upper superior part of the body and the oro-pharyngeal ulcerations are the supplementary criteria in the favour of the diagnosis of idiopathic giant ulcer of esophagus related with the HIV.

The barium esophagogram aspects for the diagnosis of giant esophageal ulcer on the HIV patient are: large, profound and single ulceration on the middle thoracic esophagus.

#### **References**

1. Levine M.S., Loercher G., Katzka D.A., Herlinger H., Rubesin S.E., Laufer I.: Giant, human immunodeficiency virus-related ulcers in the esophagus. *Radiology*, 1991, 180: 323-326.
2. Ehrenpreis E.D. and Bober D.I.: Idiopathic ulcerations of the oesophagus

in HIV-infected patients: a review. *Int J STD AIDS*, 1996, 7: 77-81.

3. Sor S., Levine M.S., Kowalski T.E., Laufer I., Rubesin S.E., Herlinger H.: Giant ulcers of the esophagus in patients with human immunodeficiency virus: clinical, radiographic, and pathologic findings. *Radiology*, 1995, 194: 447-451.
4. Siegmund B., Moos V., Lodenkemper C., Wahnschaffe U., Engelmann E., Zeitz M., Schneider T.: Esophageal giant ulcer in primary human immunodeficiency virus infection is associated with an infiltration of activated T cells. *Scand J Gastroenterol*, 2007, 42: 890-895.
5. Levine M.S., Rubesin S.E.: Diseases of the esophagus: diagnosis with esophagography. *Radiology*, 2005, 237: 414-427.
6. Wilcox C.M.: Esophageal disease in the acquired immunodeficiency syndrome: etiology, diagnosis, and management. *Am J Med*, 1992, 92: 412-421.
7. Balthazar E.J., Megibow A.J., Hulnick D., Cho K.C., Beranbaum E.: Cytomegalovirus esophagitis in AIDS: radiographic features in 16 patients. *AJR*, 1987, 149: 919-923.
8. Wilcox C.M., Schwartz D.A.: Endoscopic Characterization of Idiopathic Esophageal Ulceration Associated with Human Immunodeficiency Virus Infection. *J Clin Gastroenterologie*, 1993, 16: 251-256.