Squamous Cell Carcinoma in Barrett’s Esophagus

Esteban Trakál1*, Juan José Trakál1, Abel L. L. Butti1, Fabián E. Zárate1, Andrés Guidi2 and Rubén Sambuelli2

1Department of Gastroenterology, Reina Fabiola Clinic, School of Medicine, Catholic University of Córdoba, Argentina
2Department of Pathology, Reina Fabiola Clinic, School of Medicine, Catholic University of Córdoba, Argentina

Abstract

Barrett’s esophagus (BE), consequence of chronic gastroesophageal reflux disease (GERD), is a pre-malignant condition, capable of turning into adenocarcinoma (ACa). However, the presence of squamous cell carcinoma (SCa) coexisting with Barrett’s metaplasia, is reported in some papers. The aim of this paper is to present 17 patients involving synchronous BE and SCa. However, we found some papers in which squamous or adenosquamous carcinoma develops jointly with Barrett’s mucosa instead of ACa [5-23].

Keywords: Barrett’s esophagus; Adenocarcinoma; Squamous carcinoma

Introduction

Barrett’s esophagus (BE), according with the Montreal Consensus criteria [1], is defined as columnar metaplasia lining the distal esophagus, with specialized intestinal metaplasia with goblet cells (IM+), or gastric metaplasia with cardial type or fundic-oxyntic type mucosa (GM+).

It is a pre-malignant condition with an increased risk of adenocarcinoma (ACa). Only IM develop ACa. No cancer was found in other types of columnar mucosa [2-4]. All the same, non-goblet columnar metaplasia of the esophagus could progress to cancer, but the magnitude of risk is unknown [2].

However, we found some papers in which squamous or adenosquamous carcinoma develops jointly with Barrett’s mucosa instead of ACa [5-23].

Materials and Methods

All patients were diagnosed by means of upper endoscopy, and multiple biopsies were performed in the Barrett’s mucosa and all visible lesions. The appearance and measurement of the metaplasia are classified according to C&M Prague Criteria [2,24].

Patients

From January 1982 up to January 2013, 1424 BE were diagnosed. Which 501 had IM+, and 923 GM+. ACa developed in 67 patients and squamous cell carcinoma (SCa) in 17. Two patients had simultaneously both types of cáncer. Nine of the SCa were located in the middle esophagus with a free space of malignant tissue reaching columnar metaplasia. In 2 of them ACa in Barrett’s mucosa was synchronous with SCa. In the remaining cases, neither tumor nor displasia were found. While the other 8 SCa, had evolved into distal esophagus nearby columnar metaplasia.

The gross appearance during endoscopy was of three types: mass, ulcerative or infiltrative. Varying strictures were present in all cases.

Discussion

It is known that the natural history evolves from GERD through Barrett’s esophagus to ACa. But occasionally papers report that other types of cáncer, mostly squamous or adenosquamous carcinoma, can appear related to BE [5,23].

This reminds us that Barrett’s esophagus is a mosaic of metaplasia, dysplasia and neoplasia, showing variable degrees of architectural and cell changes in the intestinal and gastric epithelium lining the esophagus [26]. So why would not it be possible for Barret’s esophagus to turn into SCa instead of ACa? We should not forget, that BE is a consequence of long-term gastro-esophageal reflux disease [27].

Various kinds of refluxed material cause different types of lesions, including ulcers, strictures, metaplasia, dysplasia, and cáncer [5,21,28].

ACa in Barrett’s is developed on IM. Failure in detection of ACa in biopsies cannot be interpreted as absence of it, as a result of the patchy appearance it may adopt [26,29].

In our series of 923 GM+, no cáncer was found in gastric-fundic or cardial columnar mucosa. Both type of cáncer (ACa and SCa) were developed in esophagus with IM.

References


*Corresponding author: Esteban Trakal, Department of Gastroenterology, Reina Fabiola Clinic, School of Medicine, Catholic University of Córdoba, Argentina, E-mail: e-trakal@onenet.com.ar

Received April 17, 2013; Accepted June 20, 2013; Published June 22, 2013


Copyright: © 2013 Trakáľ E, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.
Table 1: Squamous cell carcinoma in Barrett's esophagus.

<table>
<thead>
<tr>
<th>Date</th>
<th>Patient</th>
<th>Sex</th>
<th>Age</th>
<th>Prague C&amp;M</th>
<th>Esophageal location</th>
<th>Gross appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/8/08</td>
<td>470 AT</td>
<td>M</td>
<td>67</td>
<td>M1</td>
<td>middle</td>
<td>mass</td>
</tr>
<tr>
<td>30/10/96</td>
<td>159 AJ</td>
<td>M</td>
<td>52</td>
<td>C1</td>
<td>middle</td>
<td>ulcerative</td>
</tr>
<tr>
<td>1/5/96</td>
<td>125 BJ</td>
<td>F</td>
<td>72</td>
<td>C3</td>
<td>distal</td>
<td>ulcerative</td>
</tr>
<tr>
<td>23/4/97</td>
<td>168 GA</td>
<td>M</td>
<td>54</td>
<td>C1</td>
<td>middle</td>
<td>mass</td>
</tr>
<tr>
<td>22/5/87</td>
<td>38 GPI</td>
<td>M</td>
<td>64</td>
<td>M3</td>
<td>middle</td>
<td>mass</td>
</tr>
<tr>
<td>28/3/96</td>
<td>121 LF</td>
<td>M</td>
<td>58</td>
<td>C3</td>
<td>distal</td>
<td>mass</td>
</tr>
<tr>
<td>31/10/96</td>
<td>161 MJF</td>
<td>M</td>
<td>72</td>
<td>C1</td>
<td>middle</td>
<td>ulcerative</td>
</tr>
<tr>
<td>30/10/98</td>
<td>195 MV</td>
<td>M</td>
<td>76</td>
<td>C3</td>
<td>middle+distal (SCa+ACa)</td>
<td>mass</td>
</tr>
<tr>
<td>26/7/00</td>
<td>219 MF</td>
<td>M</td>
<td>63</td>
<td>C2</td>
<td>distal</td>
<td>mass</td>
</tr>
<tr>
<td>12/9/96</td>
<td>145 OT</td>
<td>M</td>
<td>58</td>
<td>C2</td>
<td>middle</td>
<td>infiltrative</td>
</tr>
<tr>
<td>9/8/94</td>
<td>86 PH</td>
<td>M</td>
<td>63</td>
<td>M3</td>
<td>distal</td>
<td>infiltrative</td>
</tr>
<tr>
<td>8/2/94</td>
<td>81 LC</td>
<td>M</td>
<td>32</td>
<td>C9</td>
<td>middle</td>
<td>ulcerative</td>
</tr>
<tr>
<td>10/10/96</td>
<td>149 QD</td>
<td>F</td>
<td>83</td>
<td>C1</td>
<td>middle+distal (SCa+ACa)</td>
<td>mass</td>
</tr>
<tr>
<td>7/10/02</td>
<td>464 RJ</td>
<td>M</td>
<td>59</td>
<td>C6</td>
<td>distal</td>
<td>mass</td>
</tr>
<tr>
<td>13/9/02</td>
<td>463 RE</td>
<td>M</td>
<td>55</td>
<td>C3</td>
<td>distal</td>
<td>infiltrative</td>
</tr>
<tr>
<td>7/2/96</td>
<td>116 RME</td>
<td>F</td>
<td>71</td>
<td>C6</td>
<td>distal</td>
<td>infiltrative</td>
</tr>
<tr>
<td>11/10/02</td>
<td>465 TB</td>
<td>M</td>
<td>81</td>
<td>C4</td>
<td>distal</td>
<td>infiltrative</td>
</tr>
</tbody>
</table>