Gastrointestinal Infection by Cytomegalovirus in Immunocompetent Patient: casuistry 10 years

de Gregorio S (1), Araujo Orozco K (1), Farina J (1), Avagnina A (2), Real J (2) and Foccoli M (1)

(1) División Infectología . y (2) Departamento Anatomía Patológica
Hospital de Clínicas “José de San Martín”. Universidad de Buenos Aires. Argentina

Introduction

Gastrointestinal Cytomegalovirus (GI CMV) infection is unusual in immunocompetent host and the most involved site is the colon.

The objective of the study was to evaluate clinical presentation, diagnosis and evolution of GI CMV infection in immunocompetent patient.

Methods

Study: retrospective, observational.
Data was extracted from immunocompetent inpatients’ medical charts with GI CMV infection at a university hospital from 01/01/2006 to 12/31/2014.
We evaluated age and sex, previous abdominal pathology, symptoms related to GI CMV infection, treatment and mortality at 30 days.

-Definitions

GI CMV infection: symptoms from upper or lower gastrointestinal tract and findings of macroscopic mucosal lesions on endoscopy and demonstration of CMV infection (by culture, histopathology testing, immune-histochemical analysis, or in situ hybridization) in a gastrointestinal tract biopsy specimen. (Ljungman P. et al. Clinical Infectious Diseases 2002; 34:1094-1097)

Results

- Six patients were included. The mean age was 62 years old (18-90), four were females.
- Previous abdominal pathology in 4 patients (67%), arterial hypertension 1 and desnutrition 1.
- Symptoms of GI CMV infection were: hematochezia in 4 patients (67%), abdominal pain in one patient (17%) and one intestinal obstruction (17%).
- Endoscopic findings: ulcers in 5 patients (83%) and intestinal polyp in one patient. Histological findings were intra-nuclear and/or cytoplasmic inclusions. Immunohistochemistry techniques were performed and confirmed diagnosis in all of them.
- No patient had other site involved.
- Four patients were treated with ganciclovir: 2 required intestinal resection due to perforation and both survived. Among the other two patients, one died.
- Two patients did not receive any treatment at all and survived.
- Mortality at 30 days was 17% (1/6).

Table 1. Gastrointestinal Cytomegalovirus infection: Features episodes.

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age (year)</th>
<th>Gender</th>
<th>Background</th>
<th>Onset</th>
<th>Endoscopy findings</th>
<th>Treatment</th>
<th>Evolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>80</td>
<td>Female</td>
<td>Arterial hypertension</td>
<td>Intestinal obstruction</td>
<td>Rectosigmoid ulcer</td>
<td>Ganciclovir</td>
<td>Survival</td>
</tr>
<tr>
<td>2</td>
<td>84</td>
<td>Female</td>
<td>Diverticulitis</td>
<td>Hematochezia</td>
<td>Rectal ulcer</td>
<td>No</td>
<td>Survival</td>
</tr>
<tr>
<td>3</td>
<td>90</td>
<td>Female</td>
<td>Duodenal ulcer</td>
<td>Abdominal pain + Vomitos</td>
<td>Small bowel ulcer</td>
<td>No</td>
<td>Survival</td>
</tr>
<tr>
<td>4</td>
<td>73</td>
<td>Male</td>
<td>Partial resection of small bowel Diabetes</td>
<td>Hematochezia</td>
<td>Multiples rectal ulcers</td>
<td>Ganciclovir</td>
<td>Death (3rd day)</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
<td>Male</td>
<td>Obesity</td>
<td>Hematochezia + Intestinal obstruction</td>
<td>Multiples jejunum ulcers</td>
<td>Ganciclovir + surgery</td>
<td>Survival</td>
</tr>
<tr>
<td>6</td>
<td>18</td>
<td>Female</td>
<td>Multiple intestinal polyposis Total colectomy Partial resection of small bowel Desnutrion</td>
<td>Diarreha + Hematochezia</td>
<td>Multiple intestinal polyposis</td>
<td>Ganciclovir + surgery</td>
<td>Survival</td>
</tr>
</tbody>
</table>

Conclusions

- Hematochezia was the prevalent symptom in GI CMV in patients with unknown cause of immunosuppression.
- Medical treatment could not be assessed due to the small sample size.
- GI CMV infection should be considered like differential diagnosis in immune-competent adults with intestinal symptoms, especially with previous intestinal pathology.
- Immunoscenecence could be a predisponent factor.