Clinical treatment of gastroduodenal bleeding

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Introduction

The present study was accomplished through cooperation between the Departments of Internal Medicine and Surgery, which is highly significant because the results were comprehensive without a bias toward either department. The present report investigates whether emergency operations have decreased due to progress in various conservative hemostatic methods for bleeding ulcers, and the short-term and long-term prognosis after conservative therapy.

Materials and Methods

Subjects consisted of patients admitted to Kitasato University Hospital and Kitasato University East Hospital for gastrointestinal hemorrhage between 1971 and 1988. The clinical courses of patients during the first 9 years (1971 to 1979) of the study were compared to those of patients admitted during the last 9 years (1980 to 1988) of the study.

In this study, emergency endoscopy was defined as endoscopy carried out within 24 hour after an acute hemorrhage and emergency surgery was defined as surgical intervention carried out within 24 hour after acute hemorrhage.

Results

1. Source of upper GI bleeding

As shown in Table 1, the causes of 1263 cases of upper GI bleeding between 1971 and 1988 were gastric ulcer (37.3%), and duodenal ulcer (16.6%). This contrasts with Western nations where duodenal ulcer is more common than gastric ulcer1-2.

2. Present status of hemostasis

Many methods have been used for endoscopic hemostasis. In 1971, there was electrocoagulation, which was followed by laser, heater probe, local injection and microwave coagulation. We have used many of these methods3. Almost all of these methods were effective in over 80% of the cases.

During the first 9-year period from 1971 to 1979, conservative treatment was employed in 61% of the cases while from 1980 to 1988 this number increased to 76%. On the other hand, emergency surgery was required in 20% of the cases during the first 9 year period but in only 15% during the second 9 year period (Fig. 1).

3. Therapeutic results

The therapeutic results of bleeding ulcer should be evaluated from the point of view of short-term and long-term prognosis. short-term prognosis indicates that the patient had recurrence of bleeding during the same admission period at our hospital, whereas long-term prognosis indicates that the patients were followed for more than six months after initial hemostasis.

(a) Short-term prognosis

Of 449 cases, 81.3% achieved successful hemostasis with conservative therapy. Among these
Table 1 Bleeding sources in patients with upper GI bleeding (1971-1988)

<table>
<thead>
<tr>
<th>Source</th>
<th>Cases (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastric ulcer</td>
<td>471 (37.3%)</td>
</tr>
<tr>
<td>Duodenal ulcer</td>
<td>210 (16.6%)</td>
</tr>
<tr>
<td>Stomal ulcer</td>
<td>31 (2.5%)</td>
</tr>
<tr>
<td>AGDML</td>
<td>158 (12.5%)</td>
</tr>
<tr>
<td>Mallory-Weiss syndrome</td>
<td>34 (2.7%)</td>
</tr>
<tr>
<td>Gastric tumor</td>
<td>77 (6.1%)</td>
</tr>
<tr>
<td>Esophageal varix</td>
<td>282 (22.3%)</td>
</tr>
<tr>
<td>Total</td>
<td>1263</td>
</tr>
</tbody>
</table>

patients achieving hemostasis with conservative therapy, 11.8% had rebleeding for which conservative therapy was again used for hemostasis and was successful in 62.8% (Fig. 2). Overall, conservative treatment achieved a 96% success rate for hemostasis.

(b) Long-term prognosis
Of 132 cases, 50% were recurrent ulcer cases, of which 34.8% again had rebleeding. Of these cases with rebleeding, conservative treatment was successful in 95.7%. In these emergency operations performed (Fig. 3).

4. Mortality rate
(a) Conservative treatment
The mortality rate was 11.8% for the conservatively treated patients as 54 of 459 cases died of massive bleeding or other fatal causes. Twenty-two of those 54 fetal cases were due to hemorrhagic death, defined as those believed to be directly attributable to hemorrhage, and occurring within one month following the acute hemorrhage. The mortality rate of hemorrhagic death was 7.6%. For the early period this was 7.6% (10/131 cases), while in the latter period it decreased to 3.7% (12/328 cases).

(b) Surgical treatment
Among 228 patients who underwent surgical treatment for bleeding ulcer, 13 cases died within one month following surgery, giving a mortality rate of 5.7%. The mortality rate for emergency operations was quite high at 10.2% (13/128 cases). The mortality rate for emergency surgery in the first 9 year period was 11.9% (7.59 cases), while in the latter period was 8.7% (6/69 cases). The mortality rate for elective operations was zero.

Discussion
Identification of the site of bleeding and accurate