reached the muscular layer, it was histologically typed as moderately differentiated squamous cell carcinoma. In this case, the cancer was considered to be multicentric in origin. No lymph node metastasis was observed and the patient is doing well more than 3 years after operation.

There were nine cases of cancer associated with caustic stenosis of the esophagus in the Japanese literature including the one above. In these cases, cancer of the esophagus was observed 25–51 years after ingestion of a caustic substance. Dysplasia surrounding the cancer was seen in three (33%) of the nine cases.

The characteristics of caustic stenosis of the esophagus are:
- severe inflammatory changes can be seen for long periods,
- development of carcinoma was observed more than 25 years after the episode causing caustic stenosis,
- Dysplasia was not found in resected specimens from patients with only caustic stenosis; however, severe dysplasia was found in three out of nine cases of esophageal cancer associated with caustic stenosis of the esophagus.

Introduction

What are the comparative late results of the different treatments?

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Caustic injuries of the esophagus are a rather unusual cause of emergency in the gastrointestinal system. However, the complexity and the severity of the lesions often result in an extremely difficult therapeutic problem, even more difficult than for esophageal carcinoma or peptic stenosis.

Besides the general evaluation, it is of paramount importance to evaluate the extent of the caustic lesions. This is usually done according to the criteria Di Constanzo and Noirclerc [2]:

Stage I: Catarrhal esophagitis, confined to the mucosa,

Stage II: Whitish ulcerations, limited necrosis; small bleeding spots with lesions as deep as the muscularis,

Stage III: Extensive necrosis and bleeding; brown-black mucosa over the entire circumference of the esophagus,

Stage IV: Complete carbonization of the mucosa.

The exact determination of the depth of the lesions remains very difficult, if not impossible. Endoscopic evaluation must be done within 12 h, because thereafter the danger of perforation increases greatly. The initial treatment determines whether or not a stenosis will occur, especially in stages II and III.
Recently, mainly under the influence of the school of Marseilles [2], the therapeutic approach underwent a clear change. Except for the initial antishock therapy, a so-called therapeutic nihilism is advocated. This means, with some exceptions, that gastric lavage is not used because of the risk of exothermic reactions aggravating the condition, no nasogastric tubes, are used, and no early dilatations are performed. Emphasis is laid on giving total parenteral nutrition. This has to be continued until complete healing of the lesions as determined by endoscopy, which can take from 3 weeks for stage II to 3 months for stage III. With this regime it was possible to reduce substantially the number of stenoses.

The value of corticosteroids seems doubtful except in patients with laryngeal edema. Early surgery is indicated only if there are symptoms of free perforation, which of course requires close clinical follow-up during the first days.

Materials and Methods

Our experiences are with 35 caustic lesions of the esophagus treated between 1975 and 1986 (Table 1). Two-thirds of the patients are women and the most striking fact

Table 1. Caustic lesions of the esophagus

| 1975–1986 | number of patients: 35 |
|-----------|
| 9 : 22 |
| 8 : 13 |
| mean age: 16.06 y. |
| accidental intake: 21 patients |
| mean age: 6.6 y. |
| suicidal attempt: 14 patients |
| mean age: 32.3 y. |

is the low mean age of this population (16 years) with 19 patients (54%) being under 15 years. Just over one-third of all patients and 87.5% of all patients older than 16 years were admitted after an attempt at suicide, the majority of them (86%) being women. The caustic products used were mainly alkali (71%), e.g., Destop, Calligène.

The patients can be divided into two groups: group I (20 patients) which comprises those patients who where admitted as an emergency, and group II (15 patients), those patients who were referred for further treatment on an elective basis.

Results

In group I (Table 2) there were five patients who did not require any specific treatment. Five patients with stage 2 and 3 lesions were treated conservatively.