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VAGOTOMY FOR PERFORATED DUODENAL ULCER

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This is a report of the results obtained in the treatment of perforated ulcer on the Service of Dr. Jaime P. Figueras at the Hospital de la Santa Cruz y San Pablo in Barcelona, Spain. Since leaving the Henry Ford Hospital in 1955, I have had the honor of serving as Assistant Surgeon on this Service.

For many years, Dr. P. Figueras has advocated and practiced treating perforated duodenal ulcers in the same fashion as noncomplicated duodenal ulcers. As a result, in our Surgical Division 90% of the perforated duodenal ulcers were submitted to "per-primam-gastrectomy" as the operation procedure of choice.

Table 1
Series I

Operative Procedures

Primary Gastrectomy	35
Single Suture	4
Mortality	0
Number of Patients	39

This surgical procedure has rewarded us with a definite cure of the disease in most patients. Of 39 cases of perforated duodenal ulcer, 35 primary gastrectomies of Poly-Hofmeister type were performed without serious postoperative complications and there were no deaths (Table 1, Ser. I). The follow-up of those patients was essentially the same as for those operated on for noncomplicated duodenal ulcer. The remaining 4 patients of the series were treated only by a suture of the perforation for the following reasons: (1) late diagnosis and (2) poor risk. Three of the 4 had recurrence of ulcer symptoms within six months and required subtotal gastrectomy. Since 1959, noncomplicated duodenal ulcers have been treated routinely by the addition of vagotomy combined with an antrectomy or an appropriate emptying procedure,

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gastroenterostomy or pyloroplasty. When it was decided to use the vagotomy for the treatment of perforated duodenal ulcer, we were concerned about the possibility of some mediastinal complications due to the opening of the hiatus structures for identification of the vagus nerves. However, we have had no complications, so far, related to the vagotomy itself.

Table 1
Series II

Suture, Vagotomy and Pyloroplasty	14
Suture, Vagotomy and Gastrojejunostomy	9
Mortality	0
Number of Patients	23

Of 23 cases of perforated duodenal ulcer, a vagotomy was performed in 14 patients in association with a pyloroplasty (with resection of the perforated ulcer); in 9 patients vagotomy, suture of perforation and gastrojejunostomy was performed (Table1, Ser. II).

Table 2

Interval between Perforation and Operation

Hours	No. of Patients
3 - 10	22
72	1
Total Patients	23

Twenty-two patients were operated on between three and ten hours after perforation; one patient was operated on three days after onset of symptoms, which must be extremely exceptional. No mortality occurred in these 23 consecutive cases.

Table 3

Complications

Eventration	2
Postoperative ileus	1
Diarrhea	1
Mortality	0

In the postoperative course, we had two incomplete eventrations (one of them on the patient operated on the third day); both patients were resutured under general anesthesia. Another patient on the eighth postoperative day had a small bowel obstruction with distention that subsided in five days with decompression Miller-Abbott

tube and medical treatment. Another patient had some diarrhea during one week. No subdiaphragmatic abscess or mediastinal complications were recorded.

A careful follow-up of the patients submitted to antrectomy with or without vagotomy and drainage operation showed them to be clinically and radiologically symptom-free. In contrast, 3 of the 4 patients who had simple suture had return of ulcer symptoms and required gastrectomy. In our opinion, suture of the perforation alone must be followed almost always by some more radical surgical procedure.

SUMMARY

A study of our own statistics and those of reports in the current literature suggest that most cases of perforated duodenal ulcer can be treated with the same operative technic and on the same basis as the noncomplicated duodenal ulcer. The uneventful postoperative course and the excellent follow-up observation of our patients proves the point. Moreover, the freedom from complications due to the technic seems to reinforce our assertion. We recommend then, vagotomy combined with antrectomy or with pyloroplasty or gastroenterostomy as the treatment of choice for the perforated duodenal ulcer. Experience and the exercise of surgical judgment will indicate the situations where alternative and lesser procedures are indicated.