

# PART V

## SUMMARY

## S U M M A R Y

The choice of operative procedure in the surgical management for of patients with duodenal ulcer has been a long established dilemma. During the past 30 years some forms of vagotomy has largely supplanted partial gastrectomy . The necessary addition of a gastric drainage procedure in truncal and selecture vagotomy has been held responsible for some post-vagotomy complication (Mckelvey, 1970 ). In an attempt to overcome these problems, the operation of highly selective vagotomy (HSV) (Johnston & Willeinson 1970) was introduced; alternatively called parietal cell vagotomy (PCV) (Amdrup & Jensen 1970) or selective proximal vagotomy (SPV) (Holle and Hart 1967) .

This study consists largely of a clinical comparison of these three types of vagotomy and comparison of their physiologic effects

Our study included 49 patients (44 males and 5 females ) with chronic duodenal ulcer admitted for elective surgery in the university gastroenterology unit of Mansoura in the period between 1976-1980 . The patients were operated upon by either PCV (17 cases ) S.V. + P (15 cases ) or T.V. + P ( 17 cases ) .

These cases subjected besides clinical assesement to a lot of investigations including gastric function studies (Basal and maximal acidity, and insulin test ), metabolic studies (fat in

stool, glucose tolerance test ). Diagnosis and post-operative evaluation were accomplished by radiological and endoscopic examination . After operation, the patients were followed for a period varying from 11 - 56 m., and functional assesement of post-operative symptoms for overall grading of results was done by using modified visick classification (Goligher, 1968).

operative mortality was nil. no recurrence was found after PCV, although recurrence occured in 2 cases (13.3%) after S.V + P one of them was unhealed up to one and half years inspite of medical and dietarey regimen and the other had recurrence after 6 m. In T.V. + P, one case showed recurrence in the form of delayed healing up to 1½ years .

As regard post-operative symptoms and complications : 2 cases showed gastric retention, one after PCV and is proved by endoscopy and by X-ray to be due to loss of antral motility indicating injury of the nerve of latarjet . The second case showing gastric retention after S.V. + P was due to narrow and deformed pyloroplasty

Vomiting has been found in 3 cases (17.6%) after PCV, in 3 cases (20%) after S.V. + P and in one case (5.8%) after T.V. + P. Vomiting was not severe and was controlled easily by diet regimen except in cases of retention .

Dumping was found in 3 cases (17.6%) after P.C.V., in 2 cases (13.3%) after S.V. + P and in 4 cases (23.5 %) after T.V. + P. The dumping was mild and in most of cases disappeared by stoppage of heavy fatty and high carbohydrate meal .

Diarrhea was found in 2 cases (11.8%) after PCV, 2 cases (13.3%) after S.V. + P and in 3 cases (17.6 %) after T.V. + P. Diarrhea was mild and not troublesome to the patient .

Distention was found in 11 cases and the distention was colonic. Heart burn was found in 4 case (8.2 %) which needed no any symptomatic treatment . The cause was most probably due to loss of normal anatomic relation of the oesophagus and stomach to the diaphragm and denervation of the abdominal oesophagus ( Woodward 1969) .

Gastric acidity done pre-operatively and post-operatively showed that PCV was associated with the highest percent of reduction of BAO ( 75.38%) followed by T.V. + P (72.14 %) followed by S.V. + P (62.92%), although no significant statistical difference was found between the three groups. The percent reduction of M.A.O. after vagotomy was about equal after PCV (69.97 %) and after T.V.+ P (70.89 %) but significantly lower in S.V. + P (58.25 %) .

In the follow-up period, we noticed that at 6m., the basal and maximal acid output increase after all types of vagotomy, but the increase was statistically insignificant and was almost maintained

during the follow-up period .

Insulin test was done on 47 cases to evaluate completeness of vagotomy. 39 cases proved repeatedly to be negative, however 8 cases proved ~~or~~ turned to be positive . The three recurrent cases proved to be insulin positive after 6 months .

No difference was found to exist between pre and post-operative 24h. fat in stool in PCV group but mild significant increase ( $P = 0.05$ ) was found S.V. + P and highly significant increase ( $P = 0.0001$ ) after T.V. + P.

Blood sugar curve showed no statistical difference between fasting blood sugar pre and post-operatively. The one-hour blood glucose value shows no changes after PCV, but mild significant increase ( $P = 0.05$ ) after S.V. + P and T.V. + P, and these changes were sustained during the all follow-up period .

Barium meal was done on 45 patients pre-operatively, 76% of them proved to be positive ulcer lesions . Gastric emptying time was reduced in all types of vagotomy, the reduction being minimum after PCV (3.77 %) followed by S.V. + P group (7.5%) and greatest after T.V. + P group (12.26%) .

46 cases were diagnosed endoscopically as active duodenal ulcer . Endoscopy was done post-operatively to assess the healing

of the ulcer and antral motility , at the end of 6 months, all cases were healed except one case in T.V. + P which remained unhealed till 1½ years, and 2 cases after S.V. + P one of them showed recurrence after 6 m, and the other was unhealed .

An overall assesement according to modified visick grading done on all operated patients showed, In PCV group : 88.2 % of cases were graded as highly satisfactory (grade I & II ), 5.9 % as satisfactory (grade III) and 5.9 % as unsatisfactory (grade IV ), In S.V. + P, 79.9 % of cases were graded as grade I & II and 20 % as grade IV. In T.V. + P group 94 % of cases considered as grade I & II and 5.9 % (one recurrent case ) as grade IV .

So the overall visick grading reveals that 87.8 % of all cases are classified as grade I & II and 2.04 % as grade III and 10.2 % as grade IV .

## C O N C L U S I O N

It can be concluded from this study that vagotomy is a safe operation for the treatment of D.U.; mortality was nil, the overall incidence of recurrence in the whole series was 6.16 % which is comparable to figures from different authors . The incidence of post-operative symptoms was low, mild to moderate in degree, and most could be easily controlled . They were equally effective in reducing gastric acidity, both basal and maximal and this reduction was maintained during the period of follow-up .

However, PCV was distinguished by the absence of recurrence, low incidence of post-operative symptoms and highly satisfactory results to the patients, but it needs a longer period of evaluation " to stand the test of time " .