

Leading article

Achalasia cardia: dilatation or operation?

In gastroenterology, as in other medical disciplines, treatment is dictated as much by current fashion as by fact, as much by the availability of new technology as by objective data. Willis in 1674 is credited with the first treatment of achalasia by dilatation. He used a whalebone dilator with great success, indeed with such prolonged success that the diagnosis in his patient must be in considerable doubt. Early this century, during the blossoming of abdominal surgery, Heller described the use of a double cardiomyotomy, modified subsequently by Zaijjer to the single myotomy used widely until recently. In parallel with this surgical experience, others preferred the use of balloon dilatation, using the Negus or Plummer bags and their variants.

With the advent of fiberoptic endoscopy, dilatation procedures have flourished, and several devices are marketed and used widely for balloon dilatation of the cardia. Because the majority of endoscopies are performed by physicians rather than surgeons, the treatment of achalasia has moved largely to the medical province. Indeed it is commonly accepted today that the first choice of treatment for achalasia is endoscopic balloon dilatation. It is difficult to determine whether this shift of emphasis is justified. This issue was addressed in an editorial in this journal eight years ago, when Vantrappen and Janssens asked 'To dilate or operate? That is the question.' In a thorough review of surgical and other literature they argued the salient points, and an extensive review of the same literature would be out of place here. The only controlled data at that time were short term so that most emphasis was laid on a comparison between the two largest retrospective series, of cardiomyotomy at the Mayo Clinic,² and 'progressive dilatation' in Leuven.³ In these studies, excellent or good results were obtained in 85% of 427 patients after myotomy, and in 77% of 403 after dilatation.

Statistically, this represents a highly significant advantage for surgical treatment. The early morbidity was low in both groups but three times higher in the dilated group (2.6 as opposed to 1%). Mortality was two per 1000 in each group. The populations compared were selected differently, and geographically separated by thousands of miles although the volume of data in each report was impressive.

What are the issues for debate, and is there any new reason to debate them? We must be concerned with treatment as well as the outcome. The treatment needs to be acceptable to patients and of minimal risk. It is generally assumed that a surgical operation must be more dangerous than an outpatient endoscopic procedure. To obtain large bodies of data involves retrospective reviews, which in so rare a disease usually include very old data. As we have seen already it is difficult to find any evidence in the literature that mortality and morbidity are greater after cardiomyotomy than after dilatation alone. Given the advances in anaesthesia and perioperative care the mortality of open operation for achalasia today is very low indeed; even previously mortality was less than 0.5%. The one advantage a surgeon has at myotomy is precision. He does not need to disrupt muscle in a totally uncontrolled way and in addition has the opportunity to add an antireflux procedure. If he chooses one that will not recreate dysphagia the surgeon's task is not entirely destructive. The dilator on the other hand lacks precision, and

compensates for this by gentle stretching, repeating the procedure as necessary. While his patient is spared the severe trauma of open surgery, he more often than not suffers repeated trauma (and risk) before obtaining relief. The risks are at least as great as with open operation, at which the dangers of anaesthesia are compensated for by tracheal intubation. This advantage is also present when dilatation is performed under general anaesthesia.

High rates of perforation have been considered acceptable in some recent reports. It is perhaps surprising that rupture can be considered so lightly. While treatment is usually successful, this should not minimise its significance. There are now of course other large series of balloon dilatations with excellent results and documented safety; however, many oesophageal perforations go unreported but remain exceedingly rare after cardiomyotomy.

Both treatments give acceptable results, with a high proportion of patients obtaining almost complete relief from dysphagia. Reflux is uncommon after both treatments, but when it occurs it may cause severe problems, because of poor oesophageal contractility. Strictures in this disease are difficult to treat, the patient having exchanged a bad disease for a worse one. It is for this reason that surgeons, used to resolving these rare failures, often favour the addition of an antireflux procedure to a cardiomyotomy – an option not available at endoscopic dilatation.⁴

Ideally we should solve this debate by a randomised controlled clinical trial. Unfortunately, this is not easy in so rare a disease. Such controlled data do exist, however, in the study by Csendes *et al*, whose patients were randomised to have either balloon dilatation or a cardiomyotomy together with a form of antireflux procedure.⁵ Since the 1983 Editorial the data from this controlled trial have been extended. Treated with appropriate caution at that time because they were so recent, the passage of time has confirmed the superiority of the results of surgical treatment. At a median follow up of 62 months, excellent results were reported in 95% of patients after myotomy, but in only 65% after dilatation. The relief of dysphagia was greater, and more rapidly achieved in those treated surgically. In spite of the cardioplasty, however, reflux was greater in the surgical patients, although not severe in either.

On the whole these workers considered that myotomy was the preferred treatment based on their controlled data. Although some of the patients in this series had Chagas' disease, most had classical achalasia, and it is likely that the outcome would be similar in both diseases.

Surgical treatment has been bypassed by the majority because of its invasive nature, in spite of its possible advantages. In the era of minimally invasive surgery, the pendulum may now swing the other way. Both on the Continent and in the United Kingdom cardiomyotomy has been performed at laparoscopy, thus offering the precision of surgery in a manner arguably less crudely invasive than balloon dilatation. If desired an antireflux procedure can be added. The major disadvantage of surgical treatment, namely the large wound with its pain, possible complications and subsequent scar, is eliminated by this procedure. Time will tell whether this becomes the accepted treatment, or just another modality to consider in this continuing debate.

*Hammersmith Hospital,
Ducane Road,
London W12 0HS*

JOHN SPENCER

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- 3 Vantrappen G, Hellemans J. Treatment of achalasia and related motor disorders. *Gastroenterology* 1980; 79: 144-54.
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