Self dilation of esophageal strictures

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SN Sullivan, MC Corke, WC Watson. Self dilation of esophageal strictures. Can J Gastroenterol 1991;5(2):49-50. Over 22 years, 26 patients were taught to dilate their esophageal strictures. Fifteen had peptic strictures, four malignant neoplasms, three achalasia, three dysphagia following fundoplication and one esophageal lichen planus. The patients with peptic strictures (mean age 58 years) did particularly well, repeatedly dilating themselves over an average of six years (range two months to 18 years). There were no serious complications. Self dilation is a safe, convenient and inexpensive way to manage patients who require repeated, frequent dilations for esophageal strictures.

Key Words: Esophagus, Self dilation, Strictures

Auto-dilatation et sténoses de l’oesophage

RESUME: Sur une période de 22 ans, 26 patients ont appris à effectuer les techniques de dilatation de leur oesophage. Quinze d’entre eux étaient porteurs de sténoses péptiques; quatre, de néoplasmes maligns; trois, d’achalasie; trois, de dysphagie consécutive à une intervention de Nissen et un, d’une oesophagite attributable au lichen plan. Les patients souffrant de sténoses péptiques (âge moyen 58 ans) et pratiquant des séances d’auto-dilatation répétées sur une moyenne de six ans (deux mois à 18 ans) ont obtenu des résultats particulièrement remarquables. L’auto-dilatation constitue une façon sûre, pratique et économique de traiter les patients qui souffrent de sténoses de l’oesophage et qui requièrent des dilatations répétées et fréquentes.

A small subgroup of patients with esophageal strictures will require repeated and frequent dilations (1-5). If they are not surgical candidates the authors’ approach has been to teach such patients, if they are able and willing, to dilate themselves. The authors report a 22 year experience with this effective, inexpensive, convenient and safe form of treatment for selected patients with esophageal strictures.

Patients and Methods

Between December 1968 and January 1990, 26 patients (17 male, nine female) ranging in age from 12 to 76 years were taught by SNS or WCW to dilate their own esophageal strictures. In April 1990, their charts were reviewed and the patients followed up by questionnaire, either addressed to themselves or to their next of kin. Twenty-two patients used blunted end mercury-weighted Hurst bougies ranging in size from 30 to 44 French (15 used 40 to 44 French). Four used tapered Maloney bougies 36 to 52 French. The frequency of dilation ranged from twice daily to once monthly, with most patients passing their bougie daily or weekly. Seven patients found the bougies difficult to use, and four were known to require the assistance of a family member. While learning, several had trouble with the technique, usually tipping the head too far back or not passing the bougie fully through the stricture. Two patients were intermittently noncompliant and redeveloped tight strictures requiring semirigid dilation over a guidewire. One patient developed a monilial esophagitis. There were no serious complications.

Fifteen patients aged 22 to 78 years (mean 58) had peptic strictures. Eight have since died. They dilated themselves for one to 10 years. Of the seven still alive, one was a noncompliant alcoholic and the procedure was abandoned after four weeks; one dilated himself for two months until he had a Nissen fundoplication and intraoperative dilation; and another dilated herself for four years until age 73 when she had an esophagectomy because of development of carcinoma. One patient was lost to follow-up.

The other four patients, now aged 39, 71, 76 and 78 years, have been dilating themselves for eight, two, five and five years, respectively. None have difficulty passing the bougie or require...
help. All are satisfied with their swallowing.

Three patients had chronic dysphagia following Nissen fundoplications. In two, the dysphagia resolved completely after six weeks or six months of self dilation. The other patient also has a peptic stricture and has been dilating himself every second day for two years.

Three patients aged 12, 70 and 76 years had achalasia. The child dilated himself for several months and then had a myotomy. The 70-year-old, a man, was first seen in 1971. Because of concomitant illnesses he was unsuitable for surgery or pneumatic dilation with a Brown-McHardy bag. He dilated himself daily with a 42 French Hurst bougie for three and one-half years. He eventually required a feeding tube. The other patient dilated herself once weekly for one year and was lost to follow-up in 1975.

One patient had a long stricture due to esophageal lichen planus. She has been dilating herself weekly for three and one-half years. She maintains her nutrition but is very dissatisfied with the dilations because of the discomfort involved.

Finally, four patients had malignant invasion of the esophagus (two gastric, one lung, one breast). Two had difficulty with the dilations, but the other two, aged 68 and 74 years, dilated themselves at home for five weeks and 10 months, respectively. Both are now dead.

**DISCUSSION**

Most esophageal strictures are due to reflux esophagitis. The majority can be managed by medical or surgical anti-reflux measures and a short course of esophageal dilation. However, 10 to 20% will require repeated and frequent dilations (1-5). The technique of self dilation is easy to learn and has been well described in a recent report from the Mayo Clinic (6). Surprisingly, only two papers (6,7) and one letter to the editor (8) have dealt specifically with this topic, although it is mentioned briefly in a number of other reports (2,9-12). The published experience comprises only 40 patients and is very like the present authors' experience. The majority of patients have peptic strictures, are in their 60s, and do not want or are not suitable for surgery. Mercury-weighted bougies, usually size 40 to 44 French are used. The frequency of dilation ranges from daily to every month or two. Good to excellent relief of dysphagia is obtained by most patients. The procedure is safe. There are only two reports of perforation, one of which occurred after 30 years of uneventful self dilation with the more rigid Eder-Puestow dilators (11,12).

In the early 1970s two of the authors' patients with achalasia and two with malignant strictures were treated by self dilation. That is not the authors' approach now. The former would undergo pneumatic dilation with a Rigiflex achalasia dilator, and the latter would have laser ablation of the tumour or placement of a Celestin tube.

While self dilation may not be the most pleasant procedure, it is quick, convenient, cost effective and safe. It takes only a few minutes to perform; the patient does not have to attend the hospital; and the cost is only that of the bougie, which currently is CDN$150 for a 42 French Hurst. If the patient is properly instructed and observed and physician back up or advice is available by telephone or in the clinic, self dilation should be relatively risk free. For these reasons the authors recommend that more patients be taught to dilate their own esophageal strictures if they are not surgical candidates and require frequent dilation by a physician.

**REFERENCES**
