Polyethylene Sling for Procidentia

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Edwards, Box, and Wainer (1962) reported the repair of a prolapse of the cervical stump with a polyethylene sling. The patient was a woman in her forties who had previously undergone vaginal hysterectomy and subsequent plastic repair. Their technique was adapted and modified to treat an elderly woman suffering from a procidentia with stress incontinence, as recorded below.

Case Report

A woman aged 86 was referred as a case of rectal prolapse. She complained of being unable to walk because of her passage coming down and of dribbling incontinence when standing. The patient, a sturdy, heavily built woman had had four children and suffered from prolapse, for which she had worn a ring for many years. She had difficulty in defaecation and took 15 sennapods every night. Even with this aid she passed small motions and had to empty the bowel by digital pressure. She thought that both passages came down. Examination, supine and standing, revealed a considerable degree of uterovaginal prolapse. The anterior vaginal wall with the urethra was very lax and was displaced downwards and backwards. There was no distinct cystocele. The posterior vaginal wall was also very lax and the rectum bulged forwards into the vagina. The cervix was low but no procidentia occurred during examination. The uterus was of normal size. The anal sphincters and canal were normal and there was no evidence of prolapse of the rectum through the anus. A diagnosis was made of severe uterovaginal prolapse associated with weakness of all the pelvic connective tissues, including the rectovaginal septum.

At operation on 13 December 1966 at the General Hospital, Birmingham, under general anaesthetic, the patient was placed in the lithotomy position with legs supported as for combined abdominoperineal operation. Traction on the cervix at once produced a complete eversion of the vagina and revealed an area of superficial ulceration surrounding and including the cervix and about 6 cm. in diameter. Cystoscopy and catheterization of both ureters were carried out, the catheters being left in position. On either side of the cervix about 2.5 cm. from the middle line a vertical incision 1 cm. long was made through the vaginal fornix. A transverse incision in the abdominal wall 8 cm. long was then made above the pubis to expose both external abdominal rings. A steel 8/10 olive-headed bougie was then manipulated through the inguinal canal and its point made to pass downwards extraperitoneally along the pelvic wall and medially towards the cervix. Without much difficulty the point was made to protrude through the small vertical incision on one side of the cervix. A nylon suture was tied round the bougie, which was then withdrawn, bringing up the suture with it to the suprapubic wound. One end of a polyethylene tube 3 mm. in diameter was tied to the vaginal end of the suture and the tube pulled up into the suprapubic wound (Figs. 1 and 2).

In the same way the other end of the tube was threaded through a tunnel from the first to the second small vaginal wound and up the other pelvic wall to the suprapubic wound. The tube was stitched firmly to the cervix with nylon. When the ends of the tube were pulled together the cervix and vaginal vault were raised to an estimated normal position, and the ends of the tube were knotted together and stitched. The abdominal wound was closed and a few fine catgut stitches were used to close the small vaginal wounds. The rectocele was corrected by plicating the posterior wall of the vagina with a single continuous vertical suture of nylon. The patient recovered quickly from the operation, which was bloodless and required no removal of tissue. Walking and urinary continence were re-established within 24 hours, and normal defaecation was also restored by the time the patient left hospital two weeks later. She would have left hospital earlier, but elected to stay in for Christmas.

She was seen one month after the operation, when she walked into the clinic. Her only complaint was frequency of micturition. Examination showed no incontinence, no descent of the cervix, and well-healed abdominal and vaginal wounds.

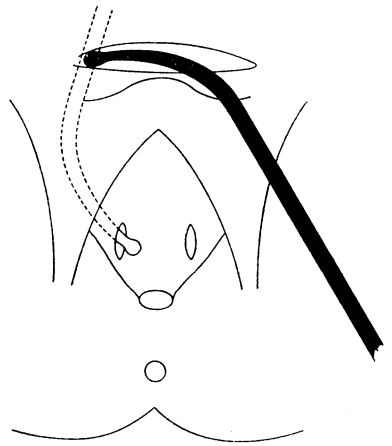

FIG. 1.—Tip of bougie lies over external ring in suprapubic wound. Dotted line shows tip of bougie presenting through small vertical wound to right of cervix. One end of nylon suture is attached to bougie neck and the other end to polyethylene tube, so that tube is drawn up to suprapubic wound. The other end of the tube, after being threaded submucously to the other cervical wound, is similarly drawn up on the left side of the pelvis to suprapubic wound. The ends are tied together so as to correct the prolapse, knotted, and secured.

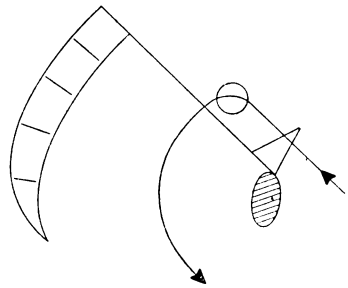

FIG. 2.—Triangle represents external ring. Circle represents internal ring. The arrowed line represents direction the bougie is made to take to present at the side of the prolapsed cervix.

Discussion

The pessary as a prop for a falling womb was a notable invention and had a long innings. Its limits were evident when pessaries were used for the poor, the slovenly, the aged, and the disabled. The rise of plastic vaginal surgery with catgut (in the hands of Donald, Fothergill, and the Manchester School) marked a great advance in the treatment of prolapse. The beautiful supple repairs which are executed by our skilled gynaecologists tend to overshadow the drawbacks of the operation and have delayed the exploitation of newer, non-absorbable materials which are such a feature of other branches of surgery.

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The drawbacks are the absence of stitchable material in some cases, intolerance of catgut in others. Furthermore, plastic repairs are elaborate exhaustive affairs for the elderly, and not always tolerant of subsequent labours in the younger women. It seems probable that there is a large field among the prolapses for permanent implants as substitutes for the normal supports when these have been damaged. These implants will be of synthetic material that is non-irritant, and they will be placed with increasing accuracy in positions which closely resemble those of the natural supports. Their insertion will demand new techniques of combined abdominoperineal approach, but as little or no tissue excision is required there will be less bleeding, less morbidity, and early ambulation.

Summary

Procidentia in an old woman was successfully corrected by a sling of polyethylene which raised the cervix by anchorage to the inguinal canals. The technique of inserting the sling extraperitoneally with the aid of a metal bougie is described. It is suggested that there is a case for using non-absorbable, non-irritant materials in treating prolapse without excising tissue. Combined abdominoperineal techniques and substitution for damaged anatomical structures are foreseen.

REFERENCES

Edwards, K., Box, I. H., and Wainer, A. (1962). *Amer. J. Obstet. Gynec.*, 83, 681.

Postcricoid Dysphagia and Iron Deficiency in Men

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The association of postcricoid dysphagia and iron-deficiency anaemia is well recognized and is known under several different names, such as the Paterson-Kelly syndrome (Paterson, 1919; Kelly, 1919), the Plummer–Vinson syndrome (Vinson, 1922), and sideropenic dysphagia (Waldenström and Hallen, 1938). Most large series show a striking female preponderance—for example, 90 out of 94 cases reported by McNab Jones (1961) and 53 out of 55 cases reported by Jacobs and Kilpatrick (1964) occurred in women, and pre-existing sideropenic dysphagia is said to account for the higher incidence of postcricoid carcinoma in women than in men, a reversal of the usual sex incidence for carcinoma of the upper alimentary tract (McNab Jones, 1961). The syndrome is thought to be premalignant, as a proportion of patients develop postcricoid carcinoma.

Some authorities believe that the iron-deficiency anaemia precedes the onset of the dysphagia (Witts, 1931; Waldenström and Hallen, 1938), and that it is the basic cause. On the other hand, others have found no evidence of iron-deficiency anaemia at the time of the development of the dysphagia (Wynder and Fryer, 1958; Jacobs, 1962) or have thought it to be a consequence rather than the cause of the dysphagia (Vinson, 1922). In a recent epidemiological study the prevalence of iron deficiency in patients with dysphagia, with or without a pharyngeal web, was found to be the same as that in a control group, and it was concluded that iron deficiency was unlikely to be an aetiological factor in the syndrome (Elwood *et al.*, 1964).

The present report describes the cases of two men with pharyngeal stenosis and postcricoid webs, and of one man with postcricoid carcinoma. They are thought to be of special interest because of the association with severe iron-deficiency anaemia—in one at the time of the development of the dysphagia and in two others preceding it by many years.

Case 1

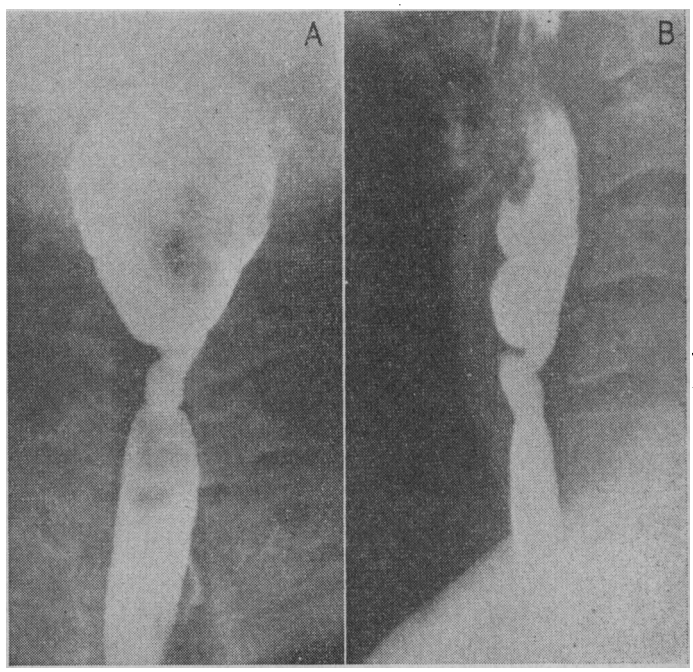
A man of 38 was admitted to hospital in February 1965 for repair of a cleft palate. Routine cineradiography of swallowing showed multiple webs in the lateral food channels at the level of the cricopharyngeus and a stricture of the oesophagus (see Fig.). On direct questioning he admitted to having had some difficulty in swallowing solids for several years. He was edentulous, the tongue was rather smooth, but there was no koilonychia, and physical examination showed nothing abnormal apart from a congenital strabismus and mild hypertension (B.P. 170/105).

Investigations.—Hb 17.2 g./100 ml.; normal peripheral blood film; M.C.H.C. 35%; serum iron 132 µg./100 ml.; free acid present in the gastric juice. Oesophagoscopy was performed by Mr. A. J. Gunning, and an oesophageal stricture, which began just below the cricopharyngeus, was dilated with bougies.

Past History.—Seven years previously he had been admitted to hospital elsewhere for haemorrhoidectomy, and was found to have severe iron-deficiency anaemia with a haemoglobin of 7.8 g./100 ml. His anaemia was corrected at that time by a transfusion of 3 pints (1.7 litres) of blood and a course of iron therapy.

Case 2

A man aged 27 was referred to the department of otolaryngology in April 1965 for investigation of pain in the throat and difficulty



Radiograph with barium (Case 1) to illustrate postcricoid webs and stenosis. A, antero-posterior view. B, lateral view.

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