of mucus reappear, which become mixed with serum, and then a little blood as the slough separates towards the end of the first week. The subsequent granulation tissue exudes a little serum, which gradually diminishes and finally disappears as the process of epithelialization is complete. The final cure, which we have noted in a large proportion of the cases, is due to the great reduction in the numbers and lengths of the glands.

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The applicators are made from a clay such as is used for the manufacture of filter candles. They are tapered to facilitate insertion and have a terminal hole for the attachment of the wire by which they are withdrawn. Tinned copper fuse wire (30 ampere) has been found most satisfactory. The following sizes have been used.

Size	Length	Diameter
1	1 inch	3/16 inch
2	1½ "	3/16 "
3	1½ "	1/4 "
4	1½ "	5/16 "

Before use each applicator is immersed in a solution of zinc chloride, 1 in 1 (a few drops of hydrochloric acid dissolves any oxychloride that may be present). The amount of the salt absorbed by the pencils during ten minutes' immersion is nearly constant for each size of applicator. I have estimated five of each size and find only a slight variation in the content of zinc chloride. The following is an average of the results.

Size

1	absorbed solution equivalent to 2.34 grains zinc chloride
2	" " " 2.73 " " "
3	" " " 4.29 " " "
4	" " " 6.6 " " "

A number of applicators were collected after use and the remaining zinc chloride estimated.

Size	Size of Applicator	Amount of zinc chloride absorbed by tissue	Per cent.
1	1 in. × 3/16 in.	—	—
2	1½ in. × 3/16 in.	2.13 grains	78
3	1½ in. × 1/4 in.	3.39 "	79
4	1½ in. × 5/16 in.	5.23 "	79

The applicators were made to specification by Messrs. A. Gallenkamp and Co. Ltd., and are also available from Messrs. Allen and Hanburys Ltd.

Summary

We have described a method of treatment of chronic leucorrhoea by destruction of the cervical glands by the necrosing action of zinc chloride. A saturated solution of the salt is applied to the cervical canal by means of a porous clay pencil, which has been soaked in the solution for ten minutes. In the majority of cases an anaesthetic is not necessary, for the insertion of the pencil causes little discomfort. A slough of the mucosa is produced and discharged in about a week. A number of sections of the cervix have been made at varying intervals after application of zinc chloride, which have demonstrated the complete re-epithelialization of the canal. The results to date show that of forty-one cases treated and examined afterwards twenty-seven are completely cured, eleven are definitely improved, and three are no better.

REFERENCE

Ainsworth-Davis, J. C. (1934). *British Medical Journal*, 2, 935.

ADHERENT FALLOPIAN TUBE CAUSING INTESTINAL STRANGULATION

BY

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"Bands formed by anatomical structures abnormally attached" are a well-recognized cause of intestinal strangulation. The commonest abnormality of this nature is an adherent vermiform appendix. In this case it was an adherent Fallopian tube which caused the abdominal catastrophe here described. Without facilities of reference to the literature I am unable to say whether this is a common condition; but as it is unique in my experience, and as the preceding and immediate clinical history present unusual features, a report of the case seems well worth while.

Case Record

The patient was a married lady of 69. The menopause had taken place at the age of 48. She first came under my care on February 15, 1936, for a complete procedentia uteri. This had been developing for thirty-five years, and beyond wearing a ring pessary at intervals no treatment had been sought. When first seen on this date the uterus was protruding two inches outside the vulva and the exposed portions were beginning to ulcerate. The uterus was replaced, a ring pessary inserted, and daily douches ordered. Apart from her age there was a moderate rise of blood pressure, a hypertrophied heart, and slight albuminuria, all seeming to contraindicate any operative treatment of the prolapse. On February 20 there was a sudden profuse discharge of half a pint of thick yellow pus from the vagina. Vaginal and rectal examination failed to disclose any disease in the uterine appendages that might be the origin of this purulent discharge, which in the absence of other causes was assumed to be intra-uterine in origin. The pessary was removed and treatment with douches, ichthyol tampons, and later with intra-uterine instillations of iodine in glycerin were tried. On March 10 the patient began to complain of frequency of micturition and burning. The urine, besides the usual trace of albumin, now contained a few pus and epithelial cells and was strongly acid: culture revealed a *B. coli* infection. Treatment by alkalis for ten days, followed by acidification and hexamine and a course of autogenous vaccine injections, cleared this up in four weeks: it is probable that there was an ascending urethral infection which had caused a mild cystitis.

The purulent vaginal discharge continued intermittently: for a few days there would be none and then several ounces would discharge unexpectedly. Repeated vaginal examination and inspection was still negative, and though pus could never be demonstrated coming from the cervical canal the trouble was thought to be a pyometra, and on March 18 dilatation and curettage was carried out, and the previous treatment with douches, tampons, and instillations continued. Thereafter the discharge gradually cleared up, and from April 20 was absent. On May 3 she was examined, and all traces of infection seemed to have gone; by then the cystitis, too, had cleared up, so the ring pessary was reinserted. During all this time there had been obstinate constipation, which failed to yield to dietetic measures and paraffin preparations, and for which daily doses of senna or cascara had been required. She was said to be subject to visceroptosis, and on March 21 there had occurred an attack of severe abdominal pain of a colicky nature, with vomiting, which had lasted all day and had been relieved only when the third turpentine enema, preceded by pituitrin, had brought away a large faecal accumulation. The pessary inserted on May 3 controlled the prolapse satisfactorily, and on May 6 the patient was convalescent in a chair.

On May 7 I saw her at 10 a.m., and was told that she had been in severe pain for two hours: the pain was of sudden onset, colicky in nature, occurring in spasms every ten to fifteen minutes. An enema, which brought away some

scybalæ with flatus, gave a little relief. It was decided, in spite of the previous attack of obstinate constipation on March 21, to withhold aperients and solid food by mouth. Hot poultices, four-hourly enemata, and belladonna were ordered. When seen again in the evening she was reported to have had a fairly comfortable day. The pain had diminished, and was now a constant ache in the left loin. There had been nausea but no vomiting, and flatus had been passed. The pulse, which was 104 in the morning, had dropped to 96, and there was no rise of temperature. The abdomen was soft, with no local tenderness or rigidity or palpable mass. Next morning, May 8, at 9.30 a.m., the condition had changed a little for the worse. The temperature was still normal and the pulse 100; there was nausea and retching without vomiting, and the pain was still an ache in the left iliac fossa and not very troublesome. There was a very little general distension of a soft abdomen, with a sensation of a mass without tenderness or rigidity in the left iliac fossa. The tongue was a little dry and the expression rather drawn and anxious, though she had slept at intervals and expressed herself as feeling better than on the previous day. No flatus had been passed during the night. Two turpentine enemata at half-hourly intervals were now ordered, each preceded by 1/2 c.cm. of pituitrin; each returned unchanged, without force and without faeces or flatus. Intestinal obstruction, which had been suspected from the first but seemed to be negated by the improvement in the condition the previous afternoon, now seemed fairly obvious, and immediate operation was arranged.

Operation

I opened the abdomen by a mid-line subumbilical incision at 11.45 a.m. on May 8, with a tentative but fairly confident diagnosis of acute following chronic intestinal obstruction due to a growth in the distal colon. At first it looked as if a serious error had been made. The intestine, large and small, was collapsed, and no growth was palpable along the colon. On lifting the gut out of the pelvis the true state of affairs was revealed when a loop of tense, distended, plum-coloured gut was found bound down in the pouch of Douglas by a tight band in the region of the right broad ligament. It was impossible to deliver the gut through the opening into which it had passed until the band had been divided between clamps. The band was a flat ribbon, a quarter of an inch thick and one inch deep from above downwards; the outer end was adherent just below the pelvic brim; the inner end was continuous with the broad ligament. The band formed the upper boundary of a circular opening about three-quarters of an inch in diameter, the other boundaries being the peritoneum of the outer pelvic wall externally and the thickened edge of the broad ligament below and to the inner side. The atrophic ovary was a small nodule of fibrous tissue below and internal to this ring. The Fallopian tube was not recognizable as an anatomical entity. The strangulated gut was a loop eight inches in length about eighteen inches from the ileo-caecal valve. Withdrawn from its hernia, the usual doubt as to viability arose; peristalsis and colour returned slowly after hot saline compresses had been applied for five minutes. There were haemorrhages into the oedematous mesentery, and patches of a grey colour at each end of the loop where the actual strangulation had occurred. At this stage the pulse became imperceptible, and as resection would have meant death on the table the patches of threatening necrosis at each end were oversewn and the abdomen closed, leaving the strangulated loop immediately under the peritoneum with a rubber glove drain leading down to it. The operation lasted twenty-five minutes. During the afternoon the patient's condition improved considerably; pain ceased, vomiting did not recur, and flatus was passed. Intravenous gum-arabic-saline-glucose infusion with *B. welchii* and *B. coli* serum with cardiac stimulation led to such improvement in the general condition that the outlook towards evening seemed fairly good, but at 2.30 a.m. the patient somewhat suddenly collapsed and died. A post-mortem was not asked for, but there was nothing to suggest that perforation and peritonitis had occurred; rather the immediate improvement suggested that death was due to exhaustion in an old lady already seriously debilitated by so many other disorders.

Commentary

The case has been set out in some detail as it did not quite illustrate the classical clinical features of intestinal strangulation. Small intestinal strangulation is generally said to cause acute, persistent, and increasing pain at the onset, with marked collapse and persistent vomiting going through the usual stages from stomach contents to faecal material. Here the pain was intermittent and never very severe, collapse was almost entirely absent, and vomiting occurred only at the onset and did not persist. During the afternoon there was definite improvement, with a fall in the pulse rate and passage of flatus. The absence of distension was a very striking feature on opening the abdomen. The earlier attack of constipation may have been due to the passage of a loop of gut through the hernial ring, but it is difficult to see how such a condition could have undergone spontaneous reduction, and equally difficult to believe that the obstruction could have been incomplete at first so as to lead to the amelioration of the symptoms during the first eight hours. As to the actual causation of the band, it is possible that the outer fimbriated end of the Fallopian tube had at some remote date become adherent to the peritoneum lining the inner wall of pelvis: prolapse of the uterus must have pulled on these adhesions and intestinal movements have moulded the adherent tube into a band, leaving an opening below. Possibly the insertion of the pessary had in some way been the exciting cause of the passage of bowel through the ring, though there was an interval of three days between the two events.

N. Danbolt (*Tidsskr. norske Laegeforen.*, November 1 and 15, 1936, pp. 1161 and 1225) defines lues congenita tarda as a condition developing after years of latency in childhood, adolescence, or even adult life. Although the prophylactic treatment of syphilis during pregnancy has been supposed to have been well established in Oslo since 1920, Professor Danbolt has observed as many as sixty-six cases of lues congenita tarda at the Rikshospital during the past five years. There were twenty-four boys and young men and forty-two girls and young women in this material. In most cases the more pronounced manifestations of the disease appeared just before or during puberty. There were eight cases in which the first manifestations appeared before the seventh year and ten cases in which they did not appear till after the nineteenth year. Parenchymatous keratitis was the first manifestation in as many as thirty-seven cases, and there were altogether fifty-one cases in which disease of the eyes developed at some time or other. Indeed, disease of the eyes was the predominant manifestation of syphilis in this material. Syphilis of the bones and joints was the first manifestation in six cases, and in six other cases it made its first appearance in the skin or mucous membranes. There were seven cases in which syphilitic disease of the central nervous system was the first warning. Hutchinson's teeth were found in twenty cases and defective hearing in five. In many cases the patients were already so old that reliable information could not be obtained about their mothers during pregnancy; but the examination of thirty mothers showed that seventeen of them had been ignorant of their infection and had received no specific treatment for it, and that the remaining thirteen, though aware of their disease and given specific treatment, had not received any during their pregnancies. It will thus be seen that nothing effective had been done in these cases to prevent the congenital syphilis during pregnancy; and the lesson of this study is that even in a civilized community at the present time there is wholesale neglect of elementary precautions against the development of congenital syphilis.