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Cervicitis and Its End Results.

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The scientific advancement of gynæcology has removed much of the tendency to operate blindly upon patients who suffer from backache, dysmenorrhœa, etc., although there are even now operations of the Gilliam type being performed empirically for backache and dysmenorrhœa, when a displaced uterus is of itself causing very little trouble.

An operation of this type may produce little or no relief to the patient, who, because of this unfortunate result, tends to regard operative procedure generally as unsatisfactory. This attitude produces the feeling that surgical procedure is faulty, or that it is unable to do what is claimed, and so there is developing, at least in Australia, a hesitancy to submit to operation. This is a natural result which will obtain so long as men do not act scientifically, but continue to be dexterous technicians without exercising proper surgical judgment.

There have been several excellent articles written regarding cervical infection. The address of Herbert H. Schlink[1] indicates the effects of cervical infection most lucidly, although it would appear that the gonococcus carried more than its share of responsibility in this direction. Schlink dealt very carefully with the lymphatic drainage of the pelvis and especially showed the cervical drainage. There can be little doubt, as he states, that the majority of cases of salpingitis are due to lymphatic spread, but after making an examination of a large number of uteri removed from patients who had bulky cervices with erosion and perhaps laceration, and whose recent history had been one long complaint of backache, aggravated in the premenstrual phase, one has entirely endorsed the remarks of James Young,[2] who referred to the cervix as being the main cause of backache in women. Vaginal examination gives evidence supporting this. As Young says: "Mobility is commonly restricted, and in those cases in which pain is present any attempt

to displace the cervix at once provokes the symptom in the location in which it has been complained of by the patient."

The effect caused by a diseased cervix is similar to that caused by the tonsils; in fact, Sturmdorff referred in such terms to the cervix. Proportionally it would seem that there is more frequently infection of the cervix than of the tonsils. Fletcher Shaw[3] is so much impressed with the cervical menace that, like his Manchester colleagues, he prefers to remove the cervix in his treatment of prolapsus uteri. The necessity for surgical intervention is not always present, but each case must be considered as a separate entity.

It remains to be demonstrated that many conditions termed leucorrhœa, especially in nulliparæ, are much more than excessive activity of the endocervical glandular tissue, but if this be the case then it is questionable whether treatment of the condition is necessary.

The two types of cervicitis which require active attention are :—

(*a*) Gonococcal cervicitis.
(b) Post-parturient conditions in which erosion has occurred, or in which lacerations have provided a site for infection, and chronic cervicitis has developed.

As an example of cervicitis initiated by gonorrhœa, the condition caused by the gonococcus is *per se* short lived, but a secondary infection invariably supervenes, and in dealing with these cases the mixed infection is that which must be treated.

Simple erosion of the post-parturient type is the result of mechanical trauma, and this causes a denudation of the squamous epithelium of the *portio vaginalis*. This abraded area is quickly covered by downgrowth of the columnar epithelium from the endocervix, and so the *portio vaginalis* becomes partly covered by adenomatous tissue. This tissue, which secretes freely, is not resistant to infection, and so by coitus or other means it becomes infected sooner or later. In premenstrual conditions it becomes congested and bleeds very rapidly. The cervix becomes bulky and spongy on the peripheral areas, but the infection causes round-celled infiltration of the deeper tissues, and this is followed by a laying down of fibrous tissue. After a time the slow-growing squamous epithelium grows over the glandular erosion and the secreting membrane, and infective organisms are retained beneath the squamous epithelium, but as these retained cells continue to secrete they produce little cysts in the cervical tissue, and these are the ovula Nabothi.

The lacerated type of cervix is invariably infected, and the amount of discharge varies from that producing an almost unnoticeable stain to a rather copious discharge which distresses the patient, and may cause general symptoms which vary from joint involvement to neurasthenia. This type of cervix, moreover, should be regarded as precancerous or of a carcinogenetic type. Robert Fowler[4] has rightly stressed this point. Local conditions frequently result from either of the foregoing types of cervicitis, and these may involve dysmenorrhœa, painful micturition and dyschæzia.

Young mentions the effect upon menstruation, which he regards as of general endocrine upset, and especially does he apply this to the pituitary gland. It would appear, however, that there is no need to look to the pituitary gland as a cause for the menstrual upset, although it is realized that the anterior lobe has a definite effect upon the ripening of the ovarian follicles (Ascheim and Zondek[5]). There is, almost without exception, some metritis, and the endometrium is hypertrophied, as a general rule, in these cases, but the endometrium (as Adler has said) is replaced monthly. It is found that in this type of cervical infection there is general pelvic congestion, and that the effect upon the ovaries is to accelerate follicular maturation and to increase the follicular and luteal hormones.

These hormones, acting upon the already congested uterus, produce an increased endometrial luxuriance, and thus the menstrual cycle is reduced in time and the menstrual flow increased in amount. It appears rather unnecessary to attribute the disturbances to the involvement of the ovaries through the sympathetic system.[2]

Treatment of Cervicitis.

The acute phase is best treated by rest, building up resistance, and douching the vaginal cavity with a weak solution of potassium permanganate, and, incidentally, one finds that most women perform this treatment by crouching over a lavatory pan so that the vaginal vault receives little or none of the injected fluid. To overcome this the patient must either lie down with the hips elevated, or stand in a bath or tub and flex the trunk on the thighs so that the shoulders are lower than the pelvis, thereby causing a ballooning of the vault, as in Sims's position, or the knee-chest position. To overcome the troublesome overflow for those who prefer to douche in the dorsal position, a suitable syringe has been devised (Fig. 1), made of vulcanite and shaped like a truncated cone. The tube conveying the fluid passes through the centre of the cone, which is closed at its base with the exception of the

overflow outlet. The truncated end has small holes at the periphery through which the fluid drains back into the cone and thence by the opening at the base.

Chronic Cervicitis.

When the condition is of gonococcal origin the cervix is treated with topical applications of two per cent acriflavine, and the diathermy method of Cumberbatch and Robertson[6] is used. In many cases, however, topical applications are futile, as they act only upon the surface tissue. It has been demonstrated by many workers, from Wertheim on, that the infecting organisms, especially gonococci, invade the sub-epithelial tissue. The infecting organisms or their toxins then invade the lymphatics, especially those of the uterosacral ligaments, and increase the severity of the symptoms. These are cases in which sub-epithelial injection of 0.5 per cent acriflavine, or three per cent mercurochrome (Matters[7]), are of great value.

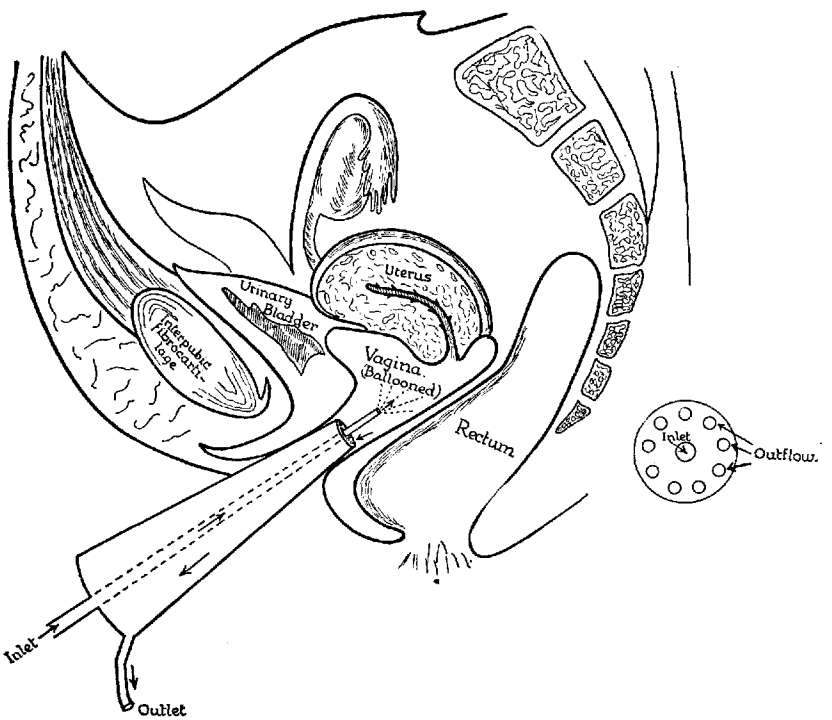

Fig. I.

VAGINA BALLOONED BY SPECIAL DOUCHING CONE.

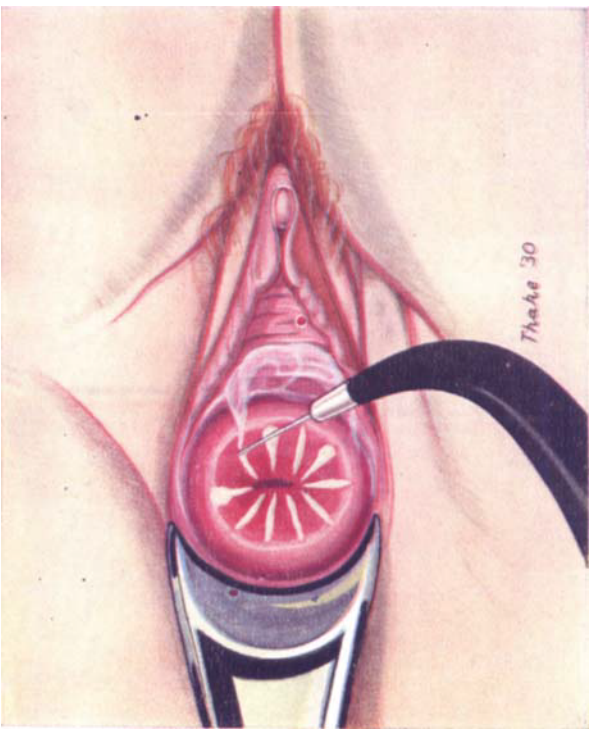

FIG. II.

RADIAL LINEAR COAGULATION BY DIATHERMY.

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When the condition is one of simple erosion, or when the deeper infection has been improved, then the endocervix and *portio vaginalis* may be treated by electro-coagulation. The cervix and cervical canal are swabbed out with weak liquor potassæ to remove the mucus, and then a swab soaked with Ryall's cocaine solution is applied to the endocervix and *portio vaginalis*. General anæsthesia is unnecessary; in fact, the treatment is ambulatory. With the patient in the lithotomy position the canal may be cauterized with an electro-cautery;[7] or, better, electro-coagulation by diathermy[4, 7] destroys some of the endocervical columnar epithelium, which becomes replaced by fibrous tissue. The cervix from the external os is cauterized radially (Fig. II), and this soon becomes overgrown with squamous epithelium.

The vagina requires to be douched after this treatment, and it would seem that hypertonic saline combined with normal sodium bicarbonate solution offers the best results.

Electro-coagulation is performed by diathermy. and preferably by the bipolar method. A belt of limpet metal is used as one electrode, while the active electrode is a needle-like electrode upon a vulcanite handle. Three or four radial striations may be made, and subsequently the intervals between these may be coagulated. The results have been excellent and many patients have completely lost their previous symptoms as the result of this treatment. Sometimes the coagulation, especially from the endocervix, separates and causes much bleeding. This bleeding may be stopped by swabbing the part and then desiccating with a monopolar (Oudin) current.

Cases of lacerations after childbirth with discharge may also be improved or even cured by means of electro-coagulation. Has it not been frequently stated that many torn cervices are possibly precancerous? It has certainly been proved so in cases which have come under our notice. A previous publication[7] drew attention to a new method of treatment. Such cervices have been treated by us as being possibly premalignant, and this method of treatment has been supported by Fowler of Melbourne.[4] The method used is that of inserting a halo of radium needles round the periphery of the cervix, giving between 400 and 600 milligram hours, and the few cervices so treated have given most gratifying results. Because of these results, and because of the apparent carcinogenic tendencies of the cervix, it is suggested that this method might with advantage be given a trial by gynæcologists generally; a statistical analysis of the cases thus treated would soon establish whether or not a step had been made towards the reduction of cervical malignant growths.

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