

THE TREATMENT OF THE LATE RESULTS OF CHRONIC NON-SPECIFIC PELVIC INFECTION*

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The treatment of chronic pelvic infection is a vexing problem both to patient and doctor, for the patient is disgruntled because her symptoms do not improve, whilst the doctor is unhappy because he feels that his treatment is inadequate. Chronic pelvic infection is a common condition, and the general practitioner probably sees more cases than the gynaecologist does in private practice. The following are the in-patient statistics for the department of gynaecology of the Karl Bremer Hospital, Bellville, for the year 1957:

Total admissions	795
European admissions	455
Non-European admissions	340
Cases of chronic pelvic infection	124 = 15%
Endocervicitis	79%
Salpingitis	21%

These figures do not include tuberculous pelvic infection, and of course many cases of chronic pelvic infection seen in the out-patient department do not appear on this list either.

Twenty patients were admitted for infertility, and in 8 of these tubal occlusion was found, of inflammatory origin.

Late results of pelvic infection may be divided into 2 groups:

1. Where there is much granulation tissue with very little scar tissue, or none, and infecting *bacteria are still present*. These cases are very liable to recurrent attacks of acute or sub-acute pelvic infection.

2. Where there is only scar tissue and *no bacteria present*. This group is much larger than the first one.

Treatment will depend on several factors, viz. (1) the age of the patient, (2) the presenting symptom, and (3) the organ or organs involved. It will be either medical or surgical or a combination of both. Obviously, the younger the patient, the more conservative the treatment.

The best way to discuss treatment is to use the anatomical approach, and to discuss the treatment of each organ, even though in many cases the entire pelvic viscera are involved simultaneously.

THE CERVIX

Chronic endocervicitis is probably one of the commonest conditions found in general practice. It presents a problem in treatment because it is very resistant to therapy and has a great tendency to recur. The principle in treatment is to remove or destroy diseased tissue and to provide *adequate drainage*. Office treatment of chronic endocervicitis is grossly

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inadequate. The patient should be hospitalized and a dilatation of the cervical canal should be performed, with adequate endocervical cauterization with an electro-coagulation cautery. It is a wise precaution to give a full parenteral course of a suitable antibiotic. Subsequent dilatation at 2-weekly intervals for 6 weeks is desirable to ensure adequate drainage. As the presenting symptom is usually leucorrhoea, the patient should be warned that her discharge will be worse for the first few weeks after the cauterization.

In cases where the patient is over 35 years of age, and the lesion fails to respond to this treatment, a hysterectomy should be seriously considered. Partial amputation of the cervix is not advisable in cases of chronic endocervicitis, unless the patient has a cervical hypertrophy and is still young. One cannot eradicate all the endocervical sepsis by partial amputation of the cervix.

(*The Corpus Uteri*. Chronic non-specific endometritis is such a rare condition that it does not call for discussion here.)

THE UTERINE TUBES

Pathology

The infection may reach the tubes by ascending infection *via* the uterus (i.e. direct) or *via* the lymphatics from the vagina, vulva or cervix; or *via* the blood or by contiguity with adjacent pelvic structures, e.g. the bowel or appendix. The disease may take the form of hydrosalpinx or pyosalpinx, where the tube wall is excessively thinned, or there may be an interstitial salpingitis, with gross thickening of the wall. The *prognosis* for normal tubal function is poor in all three types, but is best in cases of pyosalpinx; one can recall cases of large pyosalpinx which have undergone complete resolution culminating in pregnancy.

With hydro- and pyosalpinx the abdominal ostia are always closed, because of conglutination of the fimbriae, whereas with interstitial salpingitis the ostium may be open.

A different type of tubal inflammatory pathology is that following post-abortum or postpartum uterine sepsis. Here the offending organism is the anaerobic streptococcus. The lesion is typical. The post-inflammatory response involves the interstitial part of the tube only, the rest of the tube being normal. There is thus cornual tubal occlusion, which is invariably bilateral, and the patient has no symptom other than secondary infertility.

Frequently the tubes, together with the ovaries, are adherent to the posterior uterine surface and to the peritoneum of the

pouch of Douglas. This condition is responsible for the pelvic pain so often associated with chronic pelvic infection.

Treatment

Once scar tissue has formed, no medical treatment whatever will remove it. *Diathermy* to the pelvic organs, which is suggested by all the standard text-books, will not resolve scar tissue, and it is indicated only in cases where scar tissue has not yet formed, i.e. in group 1 (see above). Here, in combination with a suitable antibiotic, diathermy may hasten resolution and ease pain.

There are two chief *indications for operation*:

(a) *Infertility* (due to tubal occlusion). When the entire tube is damaged, as in hydrosalpinx or interstitial salpingitis, surgery is very disappointing, *salpingostomy* carrying only a 5% successful pregnancy rate. However, where only the cornual part of the tube is affected, as described above, *tubal implantation* carries a 20-30% successful pregnancy rate. It is of prime importance that the fimbriated end of the tube should be undamaged.

(b) *Pain*. Inflammatory tubal lesions are usually bilateral, and then unilateral tubal surgery is inadequate. Further it should be remembered that the disease process extends for the entire length of the tube, and that tubal resection *must* therefore always include the cornual or interstitial part—this applies especially in cases of pyosalpinx and interstitial salpingitis. If bilateral salpingectomy is indicated, it is desirable to conserve the ovaries, especially in younger patients. In those over 40 years old hysterectomy with bilateral salpingo-oophorectomy is the operation of choice.

THE OVARIES

Pathology. The ovaries are usually involved in conjunction with the uterine tubes. There is frequently a thickening of the capsule due to fibrosis, and this prevents ovulation, with the formation of atretic follicles. The ovary may be enlarged because of a polycystic state, the result possibly of disordered blood supply. The dense capsule may cause intracapsular tension, which may result in pain.

The normal hormonal function of the ovary is upset and dysfunctional menstruation results—usually polymenorrhoea or menorrhagia. Finally, because the ovary is usually fixed to the posterior aspect of the uterus in the pouch of Douglas, the symptom of dyspareunia is prominent.

Treatment

If the adherent ovaries cause dyspareunia, they should be mobilized by freeing all adhesions and then fixing them in an anterior position onto the anterior surface of the broad ligament. A Baldy-Webster type of ventral suspension should be performed on the uterus at the same time.

If infertility is present, and is thought to be due to non-ovulation, a wedge resection of the ovary sometimes meets with success.

In women over 40 years old bilateral oophorectomy with or without hysterectomy may be the only line of treatment.

It should be remembered, however, that there is no guarantee that surgical interference will completely cure pelvic pain of post-inflammatory origin, and this should be made very clear to the patient before embarking on operation. However, the type of patient upon whom surgery is contemplated has usually been treated *ad nauseum* by medical means with little or no success, and is only too willing to undergo operation.

HORMONE TREATMENT

Finally, I should like to draw attention to recent claims for the cortisone group of drugs, in combination with a suitable antibiotic, in the treatment of resistant chronic endocervicitis and the group-1 type of adnexal inflammation, i.e. the type with granulation tissue and viable bacteria. Wills *et al.*¹ have reported very successful results in small groups of patients with resistant chronic pelvic infection. Large adnexal masses have literally melted away in a matter of a few days. Briefly, the line of treatment is as follows:

A suitable antibiotic is given for 2 weeks *before* cortisone therapy is started—this is most important. Then 50-60 mg. of hydrocortisone is given daily for 1 week, the dose then being gradually reduced until this therapy has ceased by the end of 4 weeks. The antibiotic is naturally continued all through this time, and for at least 1 week *after* the hydrocortisone treatment has been discontinued. Throughout the treatment the patient is given a low-salt diet and fruit juice daily. No serious untoward manifestations have been reported to date. One must add that unless the treatment is well supervised the giving of cortisone in intra-abdominal infection may end in very serious or even fatal results. It must also be emphasized that the cortisone drugs have very little effect on scar tissue, so that no response can be expected in post-inflammatory scarring.

It may also be opportune to mention the role of the hormone *relaxin*, which has the property of softening ligaments, connective tissue and scar tissue. It has also been stated that this hormone gives good results in the type of case here discussed if given with antibiotics. Unfortunately the cost is prohibitive at present.

OPSOMMING

'n Pleidooi word gelewer om meer radikaal op te tree by die behandeling van chroniese bekkeninfeksie, aangesien die gebruik van antibiotika en diatermie van baie min waarde is in gevalle waar daar nog kieme teenwoordig is, en van geen waarde hoegenaamd nie in gevalle waar daar net hegweefsel is. Daar word ook gewys op die waarde van die kortisoon-groep middels en die moontlike waarde van die hormoon relaxin.

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REFERENCE

1. Wills, S. H. *et al.* (1958): *Obstet. and Gynec.*, **11**, 122.