Before laparoscopy became fashionable in Britain sterilisation was generally performed by laparotomy. The failure rate of the Pomeroy operation using absorbable suture material was about 2 per 1000. The vaginal approach by culdotomy and culdotomy never had the same popularity, and recent reports have again indicated its limitations.1

The new technique of laparoscopy required the development of effective methods of occluding the tubes. Reliance on poorly controlled high-frequency unipolar electrical current has gradually been replaced by the more controlled bipolar system or even thermocoagulation, but debate continues about the optimal amount of tube requiring destruction and the relative merits of division or resection or both. Resection has been associated with higher complication rates and in one review2 the pregnancy rate was 4·3 per 1000. Even bipolar coagulation is excessively destructive when several sites are coagulated. A surgeon attempting reversal after a Pomeroy operation finds a relatively clean surgical wound; he may find quite the opposite after electrocoagulation, when even microsurgery may be of little help if there is extensive tissue destruction. Add to this the other complications of electrocoagulation such as contact burns and its continued use becomes difficult to justify when less destructive and equally effective methods are available.

Of these alternatives, the most popular are the various occlusive devices. The tantalum (Weck) clip gave an unacceptable pregnancy rate of 7 per 1000 from tubal fistulous communications, and the results of early studies using the Hulka-Clemens spring-loaded clip showed a similar failure rate due to faulty manufacture. Nevertheless, those made in Britain (Rocket clip) have given a failure rate of only about 2 per 1000 and they destroy only 0·3 cm of tube. They have one advantage over a new snap-shut plastic clip (Hug): the applicator has a safety catch mechanism allowing removal before final closure if placement is in question. The silicone (Falope) ring causes infarction and obliteration of the lumen of the 2-3 cm of tube ensnared in the ring. Traumatic injuries to the tube and mesosalpinx have resulted from the need to draw a loop of tube into the instrument delivering the ring, but such complications have proved less frequent as operators gain experience. The failure rate is comparable with that of the Rocket clip. Successful reversal after the use of such devices has been reported.3

Any study of the reliability of a method of sterilisation, however, should take into account all the variables. These include operator experience, timing of the procedure, the route and technique used, the means of achieving occlusion, the site of tube selected, and the method of analysing results. Furthermore, as a recent report from Singapore has emphasised, expressing failure rates as the ratio of pregnancies to the total number of operations takes no account of the time of exposure.4 Pregnancies are most likely in the first two years, with a peak between three and six months, and should be expressed on a life-table cumulative basis.5 Twelve-month life table pregnancy rates on data6 from 60 different centres have shown identical rates of 2 per 1000 for laparoscopy (using electrocoagulation or devices) and minilaparotomy. Ectopic pregnancies are most likely with electrocoagulation, with a rate varying from 19·0 to 59·0.6

There is now much to recommend effective procedures which give a good chance of reversibility. The narrowest isthmic portion of the tube is the best choice for both closure and reversibility. In underdeveloped societies minilaparotomy using a Pomeroy operation or a device probably has advantages over laparoscopy. Vaginal procedures are technically more difficult and may also limit accessibility to the isthmus. In British laparoscopy seems likely to remain the most popular approach, with laparotomy being reserved for sterilisation at caesarean section and in the immediate puerperium (some obstetricians believe an elective laparoscopy at six weeks is preferable to take account of the possibility of unexpected infant death). Now that devices have proved as effective as electrocoagulation or surgical occlusion they can be recommended by any route, and preference should be given to those destroying the least tissue. Whether operations should be performed under local or general anaesthesia or in inpatients or outpatients depends upon the type of case and the resources available. Even so, we should certainly make more use of day surgery.


Recurrent vaginal candida infection

Why is vaginal infection with Candida albicans and other yeasts so often recurrent? Candida infection, of course, is the most common cause of vaginitis;1 it may lie dormant in the vagina without, or perhaps before, causing symptoms,2 and intercourse and relapse are often related. The sexual route of transmission has been recognised for many years,3 but the physical effects of intercourse may also play a part by transferring yeasts from the adjacent epithelium or by damaging the vaginal mucosa. Statistical evidence suggests that yeast infection may often be acquired sexually;4 but frequent events will also occur together frequently by chance.

Many factors may increase the susceptibility of the vagina to yeast infection,5 but being aware of them rarely helps the doctor to deal with the practical problem. Autoinfection from the bowel is well known,6 and yeasts were detected in every faecal culture in a more recent series of patients with recurrent vaginal infection.7 We have no evidence, however, that simultaneous treatment of the bowel will prolong freedom from recurrence of the vaginal infection or, indeed, that the bowel itself will not be rapidly recolonised. Whether the patient's susceptibility or some environmental factor is the main problem, in practice the effective solution usually is intermittent prophylactic treatment.

In a recent study of 40 recurrent cases Davidson and Mould8 compared prophylactic clotrimazole with a placebo. Whereas the group receiving clotrimazole had fewer symptoms subsequently, there was no difference between the two in the frequency with which candida alone was isolated. The authors suggest that the symptoms were not the result of candida alone and point out that 70% of the patients and their male partners had non-specific genital infection; a similar finding was reported by Rohatiner.9 Furthermore, when the trial ended after four months patients who proved free from candida had a recurrence of symptoms. In other words, there was a complete dissociation of symptoms and candida infection.
We urgently need confirmation of this finding. The absence of symptoms in the group on active treatment might be due to suppression, though not elimination, of candida—which would suggest that symptoms depend on the rapid growth of yeast and not merely its presence. The return of symptoms in those patients from whom candida was not grown, but whose previous symptoms had always been associated with candida infection, is more difficult to explain. The high incidence of non-specific genital infection found by Davidson and Mould would have been missed previously in such cases only if—as has been suggested—most men are asymptomatic.

Finally, the effect of treatment is often difficult to assess because the patient defaults—and, indeed, the existence of left-over drugs frequently testifies to poor compliance. All in all, a real advance in the control of recurrent candida infection has yet to come.


Hydronephrosis

Hydronephrosis is a common phenomenon. The renal pelvis or calices (or both) become distended with urine because the pelviureteric junction cannot conduct it correctly, but we still do not know what causes this abnormality. The possibilities of an increase in collagen; abnormalities in the quality of the musculature, vessels, and valves; adhesions and kinks; and high insertion of the ureter on the renal pelvis have all been carefully reviewed. But dilatation of the renal pelvis also occurs occasionally as a secondary phenomenon, resulting from primary atonicity of the normal elastomuscular tissues of the renal pelvis or from ureteric obstruction or gross vesicoureteric reflux.

Whereas excretion urography remains the cornerstone of diagnosis, it provides only a static and anatomical assessment of the dilatation. Perfusion studies do give a dynamic and functional assessment that helps in equivocal cases, but they are invasive and may be difficult to perform. Diuresis renography has recently been reported to be valuable in patients with equivocal hydronephrosis. But some workers point out that physiological measurements from the probe renogram curve cannot be reliably quantified, and that sluggish flow through a distended tract gives a curve indistinguishable from that produced by genuine obstruction.

The management of hydronephrosis should depend on its natural history. There is strong evidence that progressive renal damage occurs in most cases of primary pelvic hydronephrosis, while many of the remaining patients who show no deterioration have severe enough pain to need surgery. The treatment of choice therefore would seem to be early surgery except in the mildest cases.

In primary pelvic hydronephrosis even a thin shell of renal cortex should usually be preserved and very few nephrectomies carried out. The role of surgery is removing obstruction to preserve renal function and relieve pain. This is achieved by reconstituting the obstructed pelviureteric junction to provide a funnel between the renal pelvis and the upper ureter. There are various techniques, including the Foley and the Culp-Scardino flap procedures and the dismembered Anderson-Hynes pyeloplasty, which give satisfactory early results. The Anderson-Hynes pyeloplasty has remained effective over follow-up periods of 5-15 years.

The major problem of surgical management is deciding which of the severely diseased kidneys are worth preserving. Usually nephrectomy is performed when the kidney has been reduced to a thin shell at operation and appears to be functionless. Excretion urography may not be helpful, since kidneys that it shows to be functionless may recover to a useful extent after the obstruction has been removed. Removing a kidney that has recoverable function may precipitate, as a result of the extra water load, an acute hydronephrosis in the contralateral kidney.

The urinary pH in obstructed kidneys is higher than that of the contralateral normal kidney owing to impaired function of the distal renal tubules. In a recent study the measurement of the urinary pH of obstructed kidneys—but not urinary specific gravity or sodium concentration—was a reliable guide to subsequent recovery. Recovery was complete after the relief of obstruction in all hydronephrotic kidneys with a urinary pH below 6, but only partial when the pH was between 6 and 7.1. All kidneys that showed no function on excretion urography or found at operation to possess only a very thin shell of cortex had a urinary pH near 7-3 or higher, implying that those kidneys could not acidify urine.

In general, then, hydronephrosis should be managed surgically—pressure-flow studies and diuresis renography being helpful diagnostic techniques in the equivocal cases. But surgery should be conservative and nephrectomy performed only rarely, when the urinary pH suggests that the kidney has no recoverable function.