numbers. It is difficult to imagine how pneumatic compression can cause harm, so that must be the preferred mechanical method. All the pharmacological techniques may cause bleeding, and much more information is needed before they come into general use. Any method which is to be used on all patients with the object of preventing four or five deaths per thousand patients will have to be free of side effects, cheap, and simple before it is universally accepted. At present the published evidence suggests that more value will be obtained from screening, early diagnosis, and vigorous treatment than from the uncritical use of unproved methods of prophylaxis.

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Troubles with I.U.C.D.s

Intrauterine devices are a valuable means of contraception. They have come a long way from the camel driver who put a pebble in the womb of his beast, via the Gräfenberg ring, to the present day, when millions of women have them in place. Naturally they give some trouble in some of their users, though the complication rate is not high. They may not be acceptable to some women or to their husbands. There may be difficulties in inserting them. They may cause troublesome uterine bleeding. They may be expelled through the cervix, and rarely they may pass through the wall of the uterus and end up within the peritoneal cavity. They may fail to prevent pregnancy.

Inserting an I.U.C.D. is not technically difficult, but it is important to try to exclude prior pelvic inflammation, while fibroids and retroversion may cause difficulty. Nulliparity has been thought to contraindicate the use of devices, mainly because of the possible tightness of the internal os. But several series of cases in nulliparous women have now been reported, though G. Howard[1] found a pregnancy rate of 8% in them unacceptably high.

The cervix is most relaxed about the time of menstruation and during the period, so that it is usually advised that I.U.C.D.s might best be inserted then,[2] though this may be difficult to arrange and need not be followed slavishly.[3] Because the cervix is most easily negotiated just after abortion or delivery some obstetricians have been tempted to insert devices within a few days of these events. This may be successful, but on theoretical grounds it might be expected that there would be an increase in sepsis and that the rate of expulsion would be increased. Also it might be thought easier to perforate the uterus at the time of insertion because its wall may be soft, and it is possible that during the process of involution of the uterus the device might more easily work its way through the uterine wall. This is called extrusion or translocation. The evidence is not absolutely clear whether these theoretical expectations are fulfilled in practice, and papers can be selected to "prove" the point either way.[4] But the cautious clinician will usually wait six weeks or longer after abortion or delivery before putting in an I.U.C.D. However, when the woman seems unlikely to return for follow-up, it may be sensible to put in a device at the time of evacuation or shortly after delivery. This must be a matter for clinical judgement.

The gynaecologist as surgeon comes across patients with I.U.C.D.s in place in varying circumstances. Pelvic sepsis may be stirred up by the presence of the foreign body, or occasionally infection may have been introduced at the time of insertion. (Cervical erosion, chronic cervicitis, and ectropion are not infective lesions and so are not contraindications to the use of I.U.C.D.s.) In most cases it will be best to remove the device, since it may be an exciting or continuing cause of salpingitis. The same might be said of menorrhagia, but whether to remove it or not will depend on the patient's attitude to this symptom, how severe is her blood loss, and how badly she wishes to continue with this form of contraception. It is difficult to be sure if ectopic pregnancy has a truly raised incidence when an I.U.C.D. is in place, but it should certainly be borne in mind if the patient has abdominal pain.

A source of worry for the patient and doctor is the missing device. Its presence in the uterus is usually determined by feeling or seeing the tell-tale threads at the external os. If they are not to be found the device may have been pulled out because the woman wants to get pregnant, or it may have been inadvertently expelled without the patient's knowledge. Alternatively the threads may have retracted inside the uterus, and one cause may be an enlarging pregnancy. This must be excluded. There is no harm in the pregnancy continuing with an I.U.C.D. in place, but termination may have to be considered. If the threads have retracted in the absence of pregnancy they may reappear at the next period, so some delay might be countenanced. If the diagnosis is not clear, then radiography is needed. All present-day devices are radio-opaque and so can easily be picked up by *x*-rays. Even then it may not always be possible to be sure whether the I.U.C.D. is in its proper place or whether it has been extruded through the uterine wall. Hysterography may then make the matter plain. Often examination under anaesthesia with dilatation and curettage will be needed, when it is easy to remove an intra-uterine device. Some women will then opt for a further I.U.C.D., but many will change their method of birth control.

When an I.U.C.D. is known to be outside the uterus, there must be few women or their doctors who will be content to leave the device amid the intestines, though it is possible that no harm will result. The closed type of devices may cause strangulation of the intestine.[5] Rarely a device may be felt in the pouch of Douglas, when it may be removed by colpotomy. Recently J. R. Allen and colleagues[6] have removed five Lippes loops by laparoscopy, so avoiding formal laparotomy, which was often previously deemed to be necessary, and that must now be the method of choice. The highest incidence of translocation is probably the 0·87% reported by S. S. Ratman and J. C. K. Yin.[7]

With better trained family planners and improved designs of I.U.C.D.s the incidence of extrauterine devices is now much less than this. But though the complication is uncommon it will continue to give rise to some anxiety in individual patients.

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Synergistic Bacterial Gangrene

The synergistic bacterial gangrene described by F. L. Meleney[1] is fortunately rare, but the relentlessly destructive progress of the missed or inadequately treated condition should ensure that it is never forgotten. Typically, it begins at the site of a drain or near retention sutures one or two weeks after lower abdominal operations, but occasionally it follows incision of the chest or other areas. The wound fails to heal; surrounding skin edges become red and later raised; and as the lesion extends circumferentially the centre becomes black and necrotic, with a surrounding zone of tender, purple, oedematous tissue beyond which there is a characteristic peripheral area of bright erythematous skin.

Bacteriological cultures made from the central slough may show only coliform organisms, but the typical synergistic pathogens, micro-aerophilic streptococci and *Staphylococcus aureus*, can be isolated from the advancing edges of the ulcer. Meleney was unable to reproduce the lesion experimentally unless both synergistic partners were inoculated together into the skin of rabbits and guinea-pigs. Traditionally the treatment of synergistic gangrene includes very wide excision of the whole area—conservative débridement being insufficient—together with local treatment with gauze soaked in zinc peroxide or in more recent practice, in a neomycin-bacitracin mixture. R. W. Grainger and colleagues[2] attempted to treat one of their three cases with diathermy excision of the lesion, but progressive destruction of the tissues recurred, and this patient died. Two other patients recovered after massive antibiotic therapy without radical surgical excision but with five one-hour sessions in a hyperbaric oxygen chamber. The authors believe that the rapid cessation of the progressive disease was unlikely to have been due to the antibiotic alone, but clearly the place of hyperbaric oxygen in this condition requires further investigation.

Synergistic bacterial gangrene causes the patient intense local pain, but in the early stages it progresses insidiously and there is not much evidence of toxicity.

W. J. Rea and W. J. Wyrick[3] point out that necrotizing fasciitis can readily be confused with Meleney's gangrene, but it is a much more acute and highly toxic infection which causes widespread necrosis and undermining of the surrounding tissues. The main distinguishing feature is the extensive necrosis of the superficial fascia. Of the 44 cases of fasciitis investigated in one hospital by Rea and Wyrick over a period of 15 years 35 became infected after an initial injury outside hospital, while in nine the infection followed surgical operation. Many of the injuries were trivial and included abrasions, bruises, and insect bites. There were 13 deaths in the series, including five of eight patients with diabetes, and nearly all the deaths were in the elderly. From most of these cases two potentially pathogenic species of organism were recovered, most frequently β-haemolytic streptococci and *Staphylococcus aureus*, but in other cases only coliform organisms were isolated from a serosanguineous exudate or from the dull grey and necrotic fascia. All were treated with massive doses of parenteral as well as local antibiotics administered by drip into the wounds, which were loosely packed with fine mesh gauze.

Six cases recently described by D. B. Roberts and L. L. Hester[4] as examples of synergistic bacterial gangrene appear to have had most of the features of necrotizing fasciitis. The patients were all adults and all had diabetes with ketoacidosis, and in each case the initial lesion was an abscess either of the ducts of Bartholin's gland or of the vulva. In all cases at least two organisms were involved and in four gas-producing bacteria were recovered. Four patients were treated with antibiotics incision, and débridement, and three of them died. The fourth survived only as a permanent invalid after surgery that eventually included excision of the soft tissues down to the bladder and removal of both rami of the symphysis pubis, necessitated by osteomylitis Two patients were treated by wide excision extending beyond the areas of tissue necrosis and induration, and both of them survived. This distressing but instructive account underlines again the need for the earliest possible recognition of relatively minor infections in elderly diabetic patients, and also, it should be added, in post-partum women, when prompt and appropriate bactericidal therapy may arrest spread before destruction of tissue makes radical and immediate surgical intervention inevitable.

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Free Contraception

Sir Keith Joseph's proposal to include contraception within the Health Service, announced when he opened the second reading of the N.H.S. Reorganization Bill (p. 62), is a welcome change of attitude by the Government; so it may seem unreasonable to argue that the proposals are still unsatisfactory because pills and appliances will carry a prescription charge. But the arguments for free contraception are not based on intellectuals' liberal theories, they are practical and important.

Experience at the local authority clinics established to provide contraception in poor social areas has been that the offer of a free service has been remarkably successful[1] in attracting the parents in most need of advice—and that they have returned for follow-up visits. Much of the goodwill established by these clinics would be lost if charges had to be introduced in 1974, as they would have to be if the Government's proposal became law. Sir Keith's statement seems to imply that the supply of contraceptives by general practitioners for non-medical reasons would be limited to appliances obtainable only on prescription. Again experience