to the benefit of the patient for whose treatment the consultant has final responsibility.

Today, with more money spent to improve the facilities of hospitals for mental handicap, more staff, a slowly falling inpatient population, and a growing community commitment, there are more exciting prospects than ever before for the doctor who is prepared to specialize in mental handicap to enjoy a varied, satisfying, and rewarding career.—I am, etc.,

D. A. SPENCER

Meanwood Park Hospital,
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1 Royal Medico-Psychological Association, *British Journal of Psychiatry*, 1971, **119**, 95.

Troubles with I.U.C.D.s

SIR,—Your leading article (7 April, p. 2) is timely in the light of the experience of the wife of one of us (D.M.H.) in respect of her intrauterine contraceptive device. Whether the complication is called extrusion or translocation, the postulated mechanism in this case and the history are interesting.

The patient was fitted with a Lippe's loop in February 1969 at her postnatal examination after the birth of her second child. At the examination the uterus had involuted normally but was retroverted. The I.U.C.D. was inserted by an experienced operator with the patient in the left lateral position. As she sat up she was aware of severe left shoulder-tip pain which lasted 24 hours. This was commented on, but no action was taken. The patient did not breast-feed her baby, and menstruation occurred normally in April. Further periods occurred in May and June but these were abnormal, there being only altered blood, and this was followed by amenorrhoea. Pregnancy tests were negative and a hysterosalpingogram confirmed the presence of the loop outside the uterus. At laparotomy (N.G.) in September 1970 the loop was removed from the pouch of Douglas. A further pregnancy then occurred resulting in the birth of a normal female child on 26 August 1971. Despite the previous episode, a second Lippe's loop was inserted at her postnatal examination on 14 October, when the uterus was again retroverted. The patient breast-fed her baby and menstruation did not occur. The loop was apparently normally placed in January and May of 1972, but symptoms of pregnancy recurred at the beginning of July. A male child was born normally on 13 February 1973 and the placenta was complete. The loop was not delivered and plain radiography suggested that it was again outside the uterus. On 26 March the I.U.C.D. was retrieved from the pouch of Douglas laparoscopically (N.G.). Inspection of the uterus revealed a small scarred area on the fundus in which the nylon strings were still embedded.

It seems reasonable to suppose that the first loop was embedded in the uterine wall at insertion and that the device went on to "extrude" into the peritoneal cavity. The shoulder-tip pain occurring at insertion suggests that perforation of the uterine wall occurred at that time. The second loop was known to be normally placed for six months after insertion and was then seen laparoscopically to have sought out the weak point in the uterine wall and made its way into the peritoneal cavity via that site in the fundus. The conclusion can be drawn that it may be unrealistic to insert a second Lippe's loop where a first has already perforated the uterus.—We are, etc.,

D. MICHAEL HUMPHREYS
NIGEL GARDNER

Exeter

SIR,—In your leading article (7 April, p. 2) you state that in order to minimize the risk of perforation or translocation "the cautious clinician will usually wait six weeks or longer after abortion or delivery before putting in an I.U.C.D." However, a W.H.O. scientific group reported that the risks of perforation or translocation "appear to be smallest if the I.U.D. is inserted immediately after delivery or three or more months post-partum."[1] Furthermore, studies suggest that the risk is highest between four and eight weeks after delivery.[2,3] Thus the injunction to wait "six weeks or longer" before insertion may be counterproductive as it could result in insertions being performed during the period of maximum risk, and owing to the delay some women who might accept an early postpartum insertion will fail to return for an appointment.

Later in the same article you state that "it is difficult to be sure if ectopic pregnancy has a truly raised incidence when an I.U.C.D. is in place." The evidence suggests that the incidence of ectopic pregnancies per woman-month of exposure is in fact reduced.[1,4] Studies which have indicated an increased incidence of ectopics usually estimate ectopic pregnancies per 1,000 normal or total pregnancies, but the I.U.C.D. protects a patient from uterine pregnancy to a greater extent than from tubal pregnancy. Thus the use of total pregnancies as the numerator of the incidence rate leads to a statistical artefact and a spurious increase in the incidence of ectopics per 1,000 pregnancies among I.U.C.D. users when compared with non-users. However, calculations of the incidence of ectopic pregnancies per woman-month of exposure avoid this pitfall and have shown that the number of ectopic pregnancies is possibly reduced by the I.U.C.D. but to a lesser extent than uterine pregnancies.—I am, etc.,

R. H. GRAY

London S.W.1

1 World Health Organisation, *Intra-Uterine Device*, Technical Report Series, no. 397, Geneva, W.H.O., 1968.
2 Ratnam, S. S., and Tow, S. H., *in Post-partum Intra-uterine Contraception in Singapore*, ed. D. Wolfers. Amsterdam, Excerpta Medica, 1970.
3 Tietze, C., *Co-operative Statistical Programme for the Evaluation of Intra-uterine Devices: Sixth Progress Report, Part I*. New York, National Committee on Maternal Health, Inc; 1965.
4 Kleinman, R. L., ed. *Intra-uterine Contraception*, London, International Planned Parenthood Federation, 1972

An I.U.C.D. Dating from 1890

SIR,—Readers of the leading article "Troubles with I.U.C.D.s" (7 April, p. 2) may be interested by the following note, which was found recently in the course of removing old pathological specimens. It was written in elegant, minute script on a label glued to the bottom of the remains of a small mahogany and bevelled glass case that contained a 22-carat gold collar stud set in a decaying blue velvet mount. The note is dated May 1890. It is reproduced verbatim, but for the name of the doctor:

"This intra-uterine device, a golden collar stud, was inserted by an atheistical practitioner of St. Marylebone, ———— ———— M.D., since decd., as the means to procure non-procreation. After the passing of some months a state of pyometra was induced, a mischance, with toxicaemia that quickly subsided when the device was extracted from the canal of the neck of the womb (whence it had near exulcerated itself), a free flow of puriform foul matter from the parts relieving the Lady of all symptoms of her distress. The practr. had several times before undertaken this same manoeuvre without suffering of his patients. It was the larger aspect of the device that he would place uppermost in the canal, not as might be thought on consideration of the object, the sphaerule, which indeed should not be so closely constrained as the other. Some minims of Chloroform on a mask of cotton calmed the pavor lusus [?apprehension] s.o.s. [if necessary].

The local situation following a pyometra—a collar-stud abscess?—might well have precluded a uterine pregnancy thereafter. It is likely that a device so disproportionate in relation to the dimensions of the cervical canal, and with a narrow edge, would cause local ulceration and a substantial risk of ascending uterine infection. The stud measures a centimetre in length and the same in the diameter of its "larger aspect;" the "sphaerule" is 0·4 cm in diameter. It is in one solid piece, everywhere smooth and rounded, but the edge of the base no more than 0·1 cm thick. —I am etc.,

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Serum Alkaline Phosphatase and Rickets

SIR,—Professor A. S. Truswell (17 March, p. 677) is, of course, quite right in pointing out that among the children in our survey (10 February, p. 324) there were more Asian girls than girls of other races with serum alkaline phosphatase levels above 30 K. A. units, but whether it is valid to consider these apart from the rest is not clear. Certainly there was no significant difference between Asian, white, and West Indian girls in the mean alkaline phosphatase levels. While there may well have been some effect of winter on these findings, the first 100 schoolchildren were in fact studied in October, and thereafter in groups of 50-70 through to March.

We appreciate and indeed had not overlooked the many points raised by Dr. R. J. Prescott and his colleagues (7 April, p. 47) and by Dr. T. C. B. Stamp and Miss Joan M. Round (14 April, p. 113), as they will realize on carefully reading our paper. The level of alkaline phosphatase above which children were followed up was chosen by inspection of the histogram of the first 150. As it happens, it was similar to that chosen by Holmes *et al.*,[1] in their review of Asian children in Rochdale. The lowest level of any of our schoolchildren with radiological rickets was 31 K.A. units. The results of follow-up provide some support to our belief that these higher levels are abnormal since 60 children in the survey with these raised levels, treated for 12 months with ergocalciferol, increased, on average, 3·62 cm more in height and 3·87 kg more in weight than 90 children not so treated. The difference was significant in both parameters whether compared with the whole control group or only with those who had had comparable raised alkaline phosphatase levels ($P < 0.0005$) and was independent of race.

The question as to what constitutes normal levels of alkaline phosphatase is not easy to answer. What is clear to us is that a log-normal distribution cannot be used without further evidence as to the 25-hydroxycholecalciferol levels, particularly in those children with higher values of alkaline phosphatase found in the survey reported by