doctors (and also half the nurses) thought that their training in terminal care had been inadequate. Furthermore, the junior doctors felt they received less support from their senior colleagues than the nurses received from theirs. One cannot but sympathise also with senior colleagues, for they are too busy and may lack confidence. Two-thirds of the junior hospital doctors and nurses felt that the acute ward was not the right place for dying patients. They were, however, realistic enough not to be able to offer any alternative.

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Letting intrauterine devices lie

SIR,—Mr W G Mills sees no reason for an annual medical examination of women using intrauterine devices, based on his belief that there is no complication which might occur after the first 12 months of which the patient would not herself be aware (11 September, p 739). I share his view with one proviso, which Mr Mills would probably endorse but does not mention: that women with intrauterine devices should confirm the presence of the marker threads by regular self-examination, preferably after each menstrual period.

In a recent article I analysed 188 referrals of women with missing intrauterine-device threads.[1] The interval between insertion of the device and referral with missing threads was more than 12 months in 96 (51%) and more than five years in 22 (12%). Most women with missing threads (87%) proved to have the device still in the uterus, and none of these women were pregnant. Twenty-four women (13%), however, did not have the device in the uterus, and three (2%) had unknowingly conceived, owing to unnoticed expulsion of the device, by the time of referral. None of the three pregnant women had checked the threads themselves and none had missed a period, but all three had probably conceived by the time of attendance for routine examinations at the family planning clinics from which they were referred (two years after insertion of the device in two cases). Six of the 15 women who had expelled the device unnoticed but had not conceived had sought attention after noticing that the threads were missing; the other nine were found to have missing threads at routine examinations, six of them more than a year after insertion of the device. Translocation is almost invariably the result of uterine perforation at the time of insertion, and was detectable at an early follow-up examination in five out of six cases in my series (the remaining case of translocation had no follow-up until she requested removal of the device).

The incidence of pregnancy in this series of cases greatly underestimates the risk of pregnancy in women whose intrauterine-device marker threads are missing since it does not include women who, after unnoticed expulsion of their device, may have presented with pregnancy without knowing that the device was missing. Approximately one third of inadvertent pregnancies in users of intrauterine devices are due to unnoticed expulsion of the device.[2] These observations support the contention that careful instruction of patients in verifying that the device is in place and ready access of patients to medical attention if expulsion is suspected will improve the results of contraception with intrauterine devices.[3] Annual checks are no substitute for effective self-supervision, and in those women who are unable or unwilling to verify the presence of marker threads themselves much more frequent checks are called for.

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[1] Husemeyer RP. *J Obstet Gynecol* 1982;2:189-94.
[2] Mishell DR. In: Hefnawi F, Segal S, eds. *Analysis of intrauterine contraception.* New York: American Elsevier, 1975:27-36.
[3] Hawkins DF, Elder MG. *Human fertility control. theory and practice.* London: Butterworths, 1979: 174.

SIR,—I was interested to read your correspondence (11 September, p 739) about my article on intrauterine devices (7 August, p 395). I did not mention copper devices because I was asked to write about inert ones, but I agree with Mr W G Mills that they appear to remain effective in most cases for far longer than the two years recommended for their use. Zipper *et al*[1] studied the use of the copper 7 200 device over four years, and found the lowest pregnancy rate in the last year. Searle laboratories (personal communication) had similar findings in the fourth and fifth years of use in large clinical trials. Nevertheless, one wonders if there would be any possibility of legal problems arising if one deliberately ignored the recommendations of the manufacturers in their data sheet and a patient had an unwanted pregnancy. I have also removed several copper 7 devices on which there was little or no copper after they had been in situ for two and a half to five years,[2] and feel that their contraceptive efficiency must have been considerably reduced.

My reason for examining and taking cervical smears at yearly intervals from long-term wearers of inert devices is, as Mr A J Eynon-Lewis suggests, mainly for the detection of actinomyces-like organisms. Little is yet known about the practical implications of the presence of these organisms on the cervix, and there is no uniformity of opinion as to how these patients should be managed. For this reason I feel that it is important to gain as much information as possible. I wonder whether the patient with a brain abscess secondary to pelvic actinomycosis associated with an intrauterine device, described by Dr A E Capewell and others, had had a recent gynaecological examination.

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[1] Zipper J, Medel M, Pastene L, *et al. Contraception* 1976;13:7-13.
[2] Pollock M. *Br Med J* 1979;i:1215.

**This correspondence is now closed.—ED, *BMJ*.

Nitrofurantoin-induced parotitis

SIR,—Dr T J Pellinen and Mr J Kalske have described the first case of nitrofurantoin-associated parotitis (31 July, p 344). We have seen two similar patients, supporting the view that nitrofurantoin can occasionally cause inflammation of the salivary glands. One patient also had inflammation of the thyroid.

Case 1—A 59-year-old woman developed dry mouth, a subfebrile temperature, and tender bilateral enlargement of the parotid and submandibular salivary glands within 12 hours of taking one tablet of 50 mg nitrofurantoin. There was no lymphadenopathy and no rash. No more nitrofurantoin tablets were taken, and the patient rapidly recovered. On a previous occasion the patient had had unilateral submandibular gland enlargement after taking nitrofurantoin.

Case 2—A 71-year-old woman became acutely ill two hours after taking one tablet of nitrofurantoin (50 mg) with tender enlargement of all the salivary glands and the thyroid, dry mouth, fever of 39·5°C, and angiodema of the eyelids. Serum diastase, 2500 U/l, appeared to be from the salivary glands. The patient recovered rapidly despite continuation of other drugs (paracetamol and lactulose). She had been taking nitrofurantoin up to six days before admission without ill effects.

Nitrofurantoin is often used in short courses and might be overlooked as a cause of transient parotitis. The reporting of similar cases would be helpful to find out whether this reaction is as rare as it seems to be.

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Relation of mastalgia to breast cancer

SIR,—Mr P E Preece and others (1 May, p 1299) and Mr J Philip and others (3 July, p 58) have drawn attention to breast pain as a presenting symptom of breast cancer.

We have reviewed the notes of 1026 patients who presented to our breast clinic over a period of eight months in 1979. Of these patients, 383 (30%) gave breast pain as a principal symptom. No discrete lesion was found in 322 patients and in a two-year follow-up period none of these 322 patients developed breast cancer. Mr Preece and others drew attention to areas of well-localised breast pain, and seven of our patients had such areas: three underwent excision biopsy of the painful area, and histology showed mammary dysplasia only; none of the seven developed breast cancer in the two-year follow-up. The remaining 61 of the 383 patients with breast pain had a palpable lump: 17 of these proved to be breast cancers and 44 proved to be benign. These patients knew they had a lump even though they cited pain as their presenting symptom.

Thus while we agree with Mr Preece and others that 19% of breast cancers give pain as a presenting symptom, we would draw a different conclusion: breast pain in the absence of a breast lump is not an indication of breast cancer. It would indeed be unfortunate if women in programmes of education in breast palpation were given pain as a symptom for which they should receive a medical examination. The emphasis of such programmes must be on the finding of a lump.

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