

portant item in the *Declaration of Geneva* is "My colleagues will be my brothers." It will be a gross violation of that ethical code if the B.M.A. or any other member of the W.M.A. supports any move to expel, not the South African Government, but the M.A.S.A.—whose members are all our professional brethren who have not (as I trust this letter has shown) violated any part of the medical ethical code but, on the contrary, have maintained and are maintaining it under difficulties that have no parallel in any other country. They deserve fraternal commendation and support, not unbrotherly and unjustifiable condemnation.—I am, etc.,

G. W. GALE

Surbiton, Surrey

¹ *World Medicine*, 1972, 7, 26, p. 19.

Psychogeriatric Ward for Mentally Disturbed Elderly Patients

SIR,—Dr. D. M. Prinsley's account of 700 admissions to a psychogeriatric ward for mentally disturbed elderly patients (15 September, p. 574) ought to cause a good deal of head-scratching at the Elephant and Castle^{1,2} and among those of us of the British Geriatrics Society and the Royal College of Psychiatrists who recently agreed on ways of co-operating in the hospital care of these unfortunate people.³ Leaving behind them all buck-passing and retrospective harping on "misplaced patients," he and his persistently enthusiastic team of nurses went ahead to prove it was feasible to set aside 23 beds for the immediate or early admission of mentally disturbed elderly patients from home or from other hospital departments. This was achieved in an area with an industrial urban population of 340,000 served (apart from facilities for other disorders) by 481 psychiatric and 295 geriatric beds. It even proved possible always to have one bed immediately available for acute emergencies. These facts speak for themselves, and would make any customary expressions of congratulation sound impertinent.

This letter is written to add some background, and to ask for information on one point. It seems worth recording that in the bad old days most elderly patients with acutely presenting mental disturbances in London were admitted to mental observation wards, where facilities for treatment were rightly regarded as entirely inadequate. All the same, in one of them only 16% of 226 consecutive patients died within the first few weeks,⁴ as against 17.5% (105 deaths in 600 patients) or 15% (105 deaths among 700 admissions) during the first month in Dr. Prinsley's unit. However, just over one-fifth of the observation ward admissions were for predominantly functional psychiatric conditions. Secondly, well over 20 years ago, Dr. L. Z. Cosin made it his policy to admit practically all elderly people with organic psychosyndromes to his geriatric hospital in Oxford. While exploring methods of sampling for an investigation into the treatment of persistently confused patients,⁵ it was confirmed⁶ that during a four-month period 50 patients of this kind were admitted to the geriatric hospital and only 11 to the psychiatric facilities of the same catchment area. Dr. Prinsley states that only 26 patients

among 700 admissions required transfer to the psychiatric hospital, while patients over 65 with brain damage admitted directly to the psychiatrist's care were few and mostly from a waiting list. The message contained in Dr. Prinsley's paper would come over even more clearly if he could ask his psychiatric colleagues to give us the precise figures for this group during the period under review.—I am, etc.,

FELIX POST

Bethlem Royal Hospital and Maudsley Hospital, London S.E.5

- ¹ Department of Health and Social Security, *Services for Mental Illness Related to Old Age*, H.M. (72) 71. London, D.H.S.S., 1972.
- ² Department of Health and Social Security, *Psychogeriatric Assessment Units*, H.M. (70) 11. London, D.H.S.S., 1970.
- ³ British Geriatrics Society and the Royal College of Psychiatrists, *British Journal of Psychiatry Suppl.*, News and Notes, August 1973, 2.
- ⁴ Post, F., *British Medical Journal*, 1951, 1, 436.
- ⁵ Cosin, L. Z., Mort, M., Post, F., Westropp, C., and Williams, M., *International Journal of Social Psychiatry*, 1958, 4, 24.
- ⁶ Cosin, L. Z., Mort, M., Post, F., Westropp, C., and Williams, M., *International Journal of Social Psychiatry*, 1957, 3, 195.

Pathogenesis of Measles

SIR,—In a leading article (28 July, p. 187) on the "pathogenesis of measles" it was stated that "A simple explanation of the difference between the pathogenesis of 'European' and 'African' measles is that in the latter an impairment of cell-mediated immunity is associated with protein-calorie malnutrition, as a result of which there is a failure to eliminate virus from the tissues. But this has yet to be proved." In the Gambia, where malnutrition tends to be seasonal¹ a B.C.G. trial was being conducted during the last dry season, when the children were at their optimal weight, to determine the skin reactivity to tuberculin in comparison to a similar trial carried out during the wet season (results to be published). Unfortunately, at this time a measles epidemic affected the young children of all four villages. Out of 160 children seen over a period of two months 72 developed clinical measles and seven of these died. It was very striking that five of these were in well-nourished children (that is, as defined by being between 80 and 100% of the Boston 50th percentile of weight for age). Only one child was marasmic (<60% of the Boston 50th percentile) and one subnourished (60–80% of the Boston 50th percentile), and both these children had made good weight gains from the end of the previous wet season. The two most severe cases of measles in terms of extensive epidermal desquamation and stomatitis with bronchopneumonia were seen, not in this age group, but in a child of seven years and a woman of about 20 years.

Measles did, however drastically affect the "nutrition" of the children, and as a result 13 cases of marasmus developed while many of the other children showed severe weight loss at a time of the year when this is not associated with food shortage. This was also seen in 1961 when a similar pattern of morbidity and mortality occurred as a result of a measles epidemic during the dry season.²

It was rightly stated that "much has still to be learned about this peculiar disease in terms of the interaction between viral proliferation, malnutrition, and immune mechanisms," but care is necessary in distin-

guishing between cause and effect.—I am, etc.,

B. HEYWORTH

M.R.C. Laboratories, Fajara, The Gambia, West Africa

- ¹ McGregor, I. A., Rahman, A. K., Thompson, B., Billewicz, W. Z., and Thomson, A. M., *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 1968, 62, 341.
- ² McGregor, I. A., *West African Medical Journal*, 1964, 13, 251.

Diagnostic Radiology and the Fetus

SIR,—Dr. F. H. Kemp (1 September, p. 496) asks why many doctors have not gone as far as he and Dr. G. M. Ardran suggest (18 November 1972, p. 422). Surely the answer is that as yet there is not a single well-documented case of childhood cancer which can for certain be attributed to diagnostic radiology. The letter has been requoted (? misquoted) in the lay press, where it is stated that "about 50 children die each year in this country from cancer caused by exposure to x-rays while they were in the womb."¹

The *Code of Practice for the Protection of Persons against Ionising Radiations arising from Medical and Dental Use* 1972 states in para. 7.3.1: "In all women of reproductive capacity the clinician requesting the examination should consider the possibility of an early state of pregnancy. The date of the last menstrual period should be entered on the request form and it is the responsibility of the clinician requesting the examination to ascertain this. To reduce the likelihood of irradiation of a pregnancy, examinations involving the lower abdomen should, if practicable, be carried out within 10 days following the first day of the menstrual period."

Surely no one wishes to do anything but put this into operation. However, to insist that the patient gives a certificate to the referring physician that she has not had intercourse which might result in pregnancy and will not do so before she is x-rayed is not in the *Code*, can be embarrassing to patients (and though marked "strictly confidential" will be attached to the x-ray request card), and may not be what is really required.

The important high dose examinations to a possible early pregnancy are I.V.P.s, barium meals and enemas, and lumbar spine examinations. Surely if the referring doctor gives the date of the last menstrual period (as is suggested in the *Code*) it is then up to the radiologist or radiographer to inquire further about a possible pregnancy (which should always be done). A little delay in carrying out such examinations does give a patient time to determine whether she may be pregnant. Only recently I have had a single girl referred for one of these examinations who had apparently stated that she had not exposed herself to possible pregnancy, but when she came for x-ray admitted that her period was overdue and was possibly pregnant. A pregnancy test confirmed this.

In my view it is the responsibility of the radiologist and radiographer also to inquire whether their patients may or may not be pregnant, rather than to put the onus entirely on the G.P. or referring hospital doctor. (This has to be done privately in the x-ray room, rather than by the reception clerk in front of a number of patients.)

One also has to put the matter of radiation

protection into proper perspective. When excessively "coned" views are taken, or an incomplete examination is performed, the dose to a patient may well be increased if more radiographs have to be taken or if the examination has to be repeated. There is no substitute for an efficient adequate examination carried out at the first attendance and a proper history taken by the doctor performing the examination.

As Dr. P. R. J. Burch (16 December, p. 668) said it is not yet universally accepted that prenatal radiation causes leukaemia or neoplasia. He pointed out that fetal irradiation may cause developmental abnormalities and quoted the findings from Hiroshima where eight survivors irradiated between the 7th and 15th weeks of gestation developed microcephaly.—I am, etc.,

F. W. WRIGHT

United Oxford Hospitals

¹ *Daily Mail*, 3 September 1973, p. 11.

² Ardman, G. M., and Kemp, F. H., *British Medical Journal*, 1972, 4, 422.

Surgery on Day Patients

SIR,—I would like to reject emphatically Mr. A. B. Cassie's suggestion that any extension of day patient surgery (8 September, p. 542) need involve a second class standard of patient care.

Having been responsible for the running of a surgical day unit for the past three years, I read memorandum (HM(73)32) with interest, and found nothing sinister in it. There is now abundant evidence that a large number of patients can be dealt with comfortably and with complete safety as outpatients. The types of case suitable are well documented, and there is no need and, indeed, no suggestion, that any expansion of this group of cases be made. What is quite properly suggested is that greater use should be made of this service for patients already recognized as being suitable for it. I submit that Mr. Cassie's claim that when safety and quality of care "are not prejudiced such arrangements are generally already implemented . . ." is simply not true.

In Coventry over 2,500 patients have been operated on annually in the surgical day unit over the past three years; the numbers are limited by the facilities, not by the number of cases suitable for day surgery. The standard of care has been such that no mishap causing serious anxiety has occurred. It may well be that similar numbers have been dealt with in Burnley, but I doubt if such implementation is widespread.

I am convinced that a well run day unit offers surgical care of first-class quality and safety, and it has a marked effect in shortening the surgical waiting list. Most patients waiting for operation worry about it to some extent, and some are distressed. A long wait in itself means to some people a second-class service, and any action aimed at reducing the wait should be welcomed and encouraged.

I agree with Mr. Cassie that eternal vigilance is required against possible interference by administrators in clinical matters, but I think his indignation and suspicion are in this case misplaced.—I am, etc.,

T. H. BERRILL

Gulson Hospital,
Coventry

False Interpretation of Fetal Heart Monitoring

SIR,—The availability of cheap disposable scalp electrodes has enabled more reliable continuous recording of the fetal heart rate during labour than that obtained from the use of external recording systems, since direct attachment to the fetus is possible at an early stage of cervical dilatation.

However, despite this facility we wish to draw attention to one limitation of this system of monitoring—that is, false interpretation of the heart rate due to interference with, or substitution of, the fetal pattern by maternal signals. It is possible that the maternal rather than the fetal rate may be recorded, giving rise to a false sense of security about the condition of the fetus. Such an occurrence is a possibility if the maternal rate is high and the fetal signal is weak or absent.

An example of this is seen in the figure below, where the rate recorded by the fetal scalp electrode is approximately 120 per minute, showing normal variations and free from decelerations. However, in this instance intrauterine death had occurred a few hours earlier, as assessed by failure to hear the fetal heart with a portable Sonicaid D205 machine and absence of bleeding on fetal blood sampling. The rate recorded by the scalp electrode was synchronous with the maternal rate throughout labour up to delivery of a stillborn infant. An explanation of this occurrence is as follows.

Normally the maternal signal is about one tenth of the strength of the fetal E.C.G. signal, the latter having a voltage varying from 30 μ V to 800 μ V. In order to cope with this range the monitoring apparatus is equipped with some means of adjustment so as to scale up or scale down the variations of signal strength to enable a good rate trace to be recorded. This is effected by either an automatic gain control or manually operated sensitivity control. If the fetal heart stops or the signals reduce in amplitude monitoring equipment with a manual sensitivity control will normally register a zero rate since the circuit will not be activated. However, if the sensitivity control is turned up the maternal signal may trigger the circuit in which case the maternal rate will be recorded, or alternatively a random rate without specific pattern may result from interference signals generated by other electrical equipment in the vicinity.

Equipment with an automatic gain con-

trol will automatically increase its sensitivity in the same situation until it can obtain a signal sufficient to operate its rate circuit and the same result described above may occur. If the fetal heart fails gradually, resulting in a fall in voltage, though not necessarily in rate, eventually the monitoring equipment may record the relatively stronger maternal signal. If the fetal signal varies below and above the strength of the maternal signal abrupt changes in rate may be seen on the trace and may precede a continuous maternal recording when the fetal impulse becomes irrevocably weak. Therefore when the maternal pulse rate is found to be high and in the range normally associated with the fetus, a check should be made to establish that the maternal rate is not the same as that indicated by the fetal scalp electrode.—We are, etc.,

IAN CRAFT

DAVID TALBERT

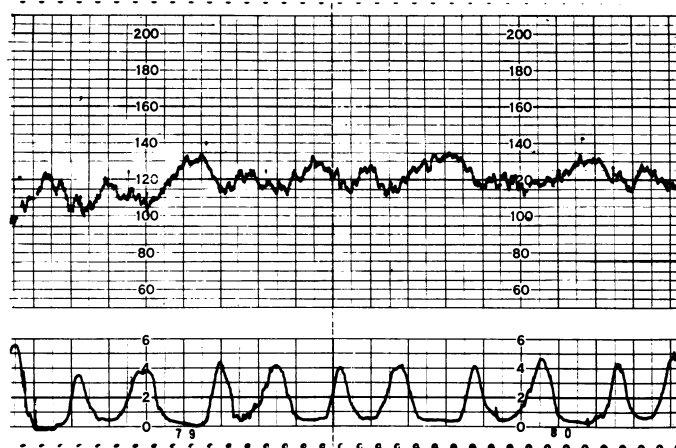
GEOFFREY CHAMBERLAIN

Institute of Obstetrics and Gynaecology,
Queen Charlotte's Hospital,
London W.6

Risks of Small Dentures

SIR,—Small dental prostheses are becoming very popular. Their dangers are perhaps not sufficiently understood by those who wear them particularly during violent physical exercise.

Recently a patient arrived in the casualty department quite unable to speak and with some respiratory difficulty. While diving into a swimming pool he inhaled a small dental prosthesis on which two teeth were mounted and it became impacted in the larynx. There was no radio-opaque material included in the prosthesis and consequently nothing was visible on x-ray. When anaesthetized, the teeth could not be seen on direct laryngoscopy and, as they were not visible on subsequent bronchoscopy or oesophagoscopy, the patient was sent back to the ward on the assumption that the prosthesis would either pass on from the stomach or would have to be retrieved by gastrotomy. As the patient was asymptomatic the following day and requested to leave hospital, he was allowed to do so. However, hardly had he reached the street but he vomited and was once more unable to talk though there was little respiratory difficulty on this occasion. As the prosthesis was once more invisible on direct laryngoscopy, the patient was with a little difficulty intubated and oesophagoscopy was performed. No dental prosthesis was visible and laparotomy was performed but the teeth were nowhere to be found. The mystery was solved when the anaesthetist removed the intubation tube and on bronchoscopy they were located in the right main bronchus. Clearly they had been



Heart rate recording is shown on the upper tracing. The lower tracing records the pattern of uterine contraction.