Surgical 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 (BMJ 1973;3:332) 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 Covington 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.,

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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 intruterine death had occurred a few hours earlier, as shown 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 μV to 800 μV. 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 control 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 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.,

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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 gastroscopy. As the patient was asymptomatic the following day and was sent 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...