

ished the average gestational age for detection.⁵ I agree with Dr Jarvis that the early diagnosis of twin pregnancy is a prerequisite for adequate antenatal care and management of delivery. In my opinion ultrasound, if available, is the diagnostic method of choice. With modern technology and with trained operators the method is highly reliable as a screening method. More than one scan should not be necessary—certainly not if twins are suspected and specially sought. With the new real-time scanners it is tempting to make it everyone's tool. However, I wish to stress that ultrasound diagnostics, similar to radiology diagnostics, should be performed by specially educated and trained operators if the method is not to be brought into disrepute.

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- ⁴ Powers, W F, *Obstetrics and Gynecology*, 1973, **42**, 795.
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- ⁸ Lidbjörk, G, Kjessler, B, and Johansson, S G O, *Acta Obstetrica et Gynecologica Scandinavica*, 1977, **69**, 45.
- ⁹ Vince, J D, *et al*, *Lancet*, 1977, **1**, 43.

Disinfection with glutaraldehyde

SIR,—I am afraid that Dr A C Mair's answer (15 September, p 673) to my letter (18 August, p 444) contains numerous inaccuracies which ought to be corrected. This gentleman wrote that I was wrong when I stated that alkaline glutaraldehyde has a maximum "use life" of 14 days.

My statement was that "under normal hospital use the alkaline compositions have a short life (maximum 14 days)." I am here talking of the continuous use and reuse of the same solution in the Arbrook Cidematic machines, which account for at least 60% of the Cidex market in US hospitals. I am not talking of the activity of a solution stored for 28 days as described by Miner *et al*.¹ Everyone knows that all cidal solutions in the USA have to show that they are still active after storage for 28 days. This has nothing to do with the activity of a solution in normal repeated use in hospitals in Cidematic machines.

Dr Mair should know that the only published data from Arbrook on this subject were released by Masferrer *et al*.² They showed that after 15 days (or 69 cycles) of continuous hospital use the Cidex content in glutaraldehyde was down to 0.87%. To reach the same level with Sonacide in the same machine one needed 26 days (or 124 cycles). Dr Mair should also know that Bageant from the University of Virginia hospital recently wrote³: "Arbrook is now recognising this problem [drop in glutaraldehyde concentration]. On their new Cidematics, they will be installing counters as well as timers. After 40 cycles or *two weeks*, whichever comes first, the glutaraldehyde will be discharged. The counters will also be installed on existing Cidematics in hospitals that want them."

In other words, Arbrook-USA had to recognise, under the supervision of the Environmental Protection Agency, that the active glutaraldehyde content of its alkaline

glutaraldehyde solutions drops faster under continuous hospital use than that of potentiated acid formulas. This indeed is in full agreement with the theoretical laws of physics (mechanical dilution) and chemistry (polymerisation of aldehydes).

By clearing the confusion created over the standard 28 days' storage life (referred to in Dr Mair's comments) one can see from the above figures and statements that in the USA Arbrook scientists themselves recognise the shorter *two weeks*' continuous use in hospital practice.

Cidex and Sonacide have long been proved excellent products in the US hospital market. Each one obviously has its merits and limitations, but it is important both from the scientific and from the practical viewpoint to distinguish between storage life and use life.

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- ³ Bageant, R A, *Respiratory Care*, 1979, **24**, 666.

The concept of disease

SIR,—The concept of disease (29 September, p 757) has generally been approached from the adult standpoint, particularly that of the professional adult—medical, sociological, or philosophical.

Alternatively, however, the way that the concept develops throughout childhood can be explored. This shows up developmental sequences and cultural differences, but it also emphasises the way that illness and concepts of disease get drawn into the arena of communication between individuals, their families, and professionals such as doctors and teachers. It is essential that this topic is further developed to help improve communication between caring agencies and their clients, and to clarify what are frequently conflicting expectations of each other. This puts "disease" in the category of a word which is used to communicate different things for different people at different times. In order to respond most appropriately to our patients we need to have some concept of what is happening for the individual in the context of our meeting with that person—which consequently limits our use as doctors to a particular situation; "disease and doctor consultation," and we must remember that this is only one of many possible contexts.

I am currently researching how children develop their concepts of illness, and would be interested to hear from those with a similar interest.

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

Anaesthesia

SIR,—Dr J Alfred Lee in his admirable paper (10 November, p 1192) tells us that "anaesthesia in the 1920s differed little from what it must have been in the 1850s"; but, to judge by his description, anaesthesia in the 1920s differed little from that of the 1940s when I was first exposed to it as a medical student—

except, perhaps, that the water-sight Boyle's machine was in regular use.

Dr Lee's paper reminds us that, though the specialty of anaesthesia was a late comer and a late developer in medical history, its progress within the span of one man's professional lifetime has been as exciting as that of aviation or atomic power and that, as a unique clinical service specialty, it has facilitated advances in almost all other branches of medicine and surgery.

Dr Lee is, however, characteristically modest about his own share in this dramatic story. He is internationally revered as an innovator and a teacher; as founder-author of the anaesthetists' "bible," *A Synopsis of Anaesthesia*; and as president of the Association of Anaesthetists of Great Britain and Ireland. His contribution to the field of local analgesia is renowned and his pioneer work in the introduction of postoperative (recovery) wards led the way in the development of intensive care. His school of anaesthesia at Southend in the 'fifties and 'sixties was of world-wide repute and surpassed that of most teaching hospitals of the time in its willingness to teach and guide its trainees—to have been a registrar with Lee at Southend is to bask in reflected glory, like a soldier who served with Wellington at Waterloo or a singer who was taught by Caruso.

Dr Lee still practices and teaches anaesthesia in his well-earned retirement. May he long continue to do so.

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Rubella immunisation

SIR,—A study I recently completed on services for the prevention of congenital rubella in an area of South-east England showed that the risk of rubella in pregnancy was widely appreciated but that most women did not know what practical steps should be taken to allay anxiety. Although most family practitioners were ready to provide serological screening and immunisation on demand, few women were aware that it was reasonable, before becoming pregnant, to ask a family practitioner about rubella prevention. Even women who had been screened for rubella antibodies as antenatal patients were mostly ignorant of the fact that they had been tested; the result was usually only mentioned to those considered to need immunisation.

Communication with the public must be improved if the policy statement that prevention is everybody's business is to lead to responsible action. The following three improvements would be valuable to the programme of congenital rubella prevention:

(1) General practices should display posters reminding patients to ask the GP about prevention. If the practice does not provide preventive services the poster should state the place and time of a public clinic which does. The DHSS should ensure that such posters are supplied to all practices.

(2) The makers of vaccines should include with phials information suitable for the adult patient. This information would reinforce verbal advice and give answers to the questions commonly asked.

(3) Women who have been screened for rubella and found seropositive should have "immune to rubella" stamped on a medical