that some strain differences in long-term persistence of antibody may be expected. It is possible that some of the vaccinees who apparently lose circulating antibody after vaccination may be protected against infection by low levels not detected by the test procedures used. On the other hand second attacks of rubella are documented,^{14 15} as is fetal damage from reinfection.¹⁶ In the United States and Great Britain peak child-bearing is at the age of 24 years, and since the duration of protection induced by vaccination is not yet assured the policy of vaccinating girls between their eleventh and fourteenth birthdays still seems to have merit in comparison with the American system of vaccinating children before school entry.

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*Our expert writes: "I am grateful to Drs Freestone and Hasell for their thoughtful comments about the duration of immunity provided by rubella vaccines and for their painstaking review of the literature. As they point out, the relationship between demonstrable circulating antibody and clinical protection must always be uncertain. The only truly valid measure of duration of immunity will be the incidence of congenital rubella among vaccinees compared with that among the unvaccinated. The cited instances of natural infections amount to three cases, in one of which the evidence is uncertain. These rare events, which may be related to host factors rather than time intervals between exposures to infection, do not in my opinion constitute an argument against a long duration of vaccine-induced immunity."

Papilloedema in patients taking perhexiline maleate

SIR,—In reply to the letter from Dr W M Hutchinson and others (4 February, p 305) we would like to make two points. Each of the patients reported in our paper (7 January, p 21) presented with severe headaches; these were often worse early in the morning and sometimes associated with nausea. We feel that the combination of these headaches and the gross papilloedema observed is good presumptive evidence of raised intracranial pressure. We accept that the only way to prove a true increase in intracranial pressure is to make a direct measurement, but we felt

that the risks to the patients outweighed the benefits of what was largely an academic exercise. It is not clear if the man reported by Dr Hutchinson and his colleagues was experiencing headaches.

Secondly, they quote Bousser's paper¹ and say that "a high CSF protein concentration was noted, up to 10 g/l." However, the three patients reported with neuropathy and papilloedema had CSF protein concentrations of 1.75, 4.2, and 1.35 g/l respectively. One patient with neuropathy alone had a CSF protein of 3.2 g/l. These are, of course, much lower than the levels suggested by Dr Hutchinson's letter.

It is open to debate whether a comparison to the Guillain-Barré syndrome is valid, and certainly on the present evidence abnormalities in CSF protein are unlikely to give the complete answer to the aetiology of papilloedema due to perhexiline maleate.

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Postoperative chest infections

SIR,—Your leading article (10 December, p 1500) and Drs J L Craven and G A Evans (28 January, p 237) emphasise the importance of deep breathing in the prevention of post-operative respiratory complications. Nobody has mentioned the therapeutic value of respiratory stimulants given soon after operation. Four independent studies¹⁻⁴ have shown a significant reduction of coughing and excessive production of purulent sputum or other respiratory complications in patients given either a single dose (1-1.5 mg/kg body weight) or infusion of doxapram with the first post-operative analgesic.

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Lymphocytotoxic antibodies in spontaneous cytomegalovirus infection

SIR,—Cold-reactive lymphocytotoxic antibodies (LCA) have been demonstrated in patients with acute viral infections such as infectious mononucleosis, measles, and rubella¹ and in normal individuals following immunisation with viral vaccines.² They have also been detected in patients suffering from other diseases thought to be related to viral infection, such as systemic lupus erythematosus,³ rheumatoid arthritis,³ multiple sclerosis,⁴ etc.

We have found LCA in the serum of all of five patients with primary cytomegalovirus (CMV) infection (CMV mononucleosis). CMV infection was demonstrated by the isolation of the virus from saliva or urine,

by the demonstration of a fourfold rising CMV complement-fixing antibody titre, or by both methods. In addition, in all patients an elevated CMV specific IgM antibody titre was demonstrated. These five patients had not received blood transfusions within the six months before infection and were considered to be suffering from spontaneous CMV infection. In contrast, we have not found LCA in the serum of four patients with CMV mononucleosis occurring within four weeks after multiple blood transfusions.

Spontaneous, but not transfusion-associated, CMV infection should be added to the list of diseases causing the appearance of LCA. The finding of LCA in spontaneous CMV infection, besides its theoretical interest, may have some practical implications. If, for instance, LCA are found during screening for HLA antibodies in the serum of patients on dialysis waiting for a kidney transplant one should look for a CMV or other virus infection. In addition it is important to distinguish LCA from anti-HLA antibodies because their significance may be different. We⁵ and others⁶ have shown that cold-reactive LCA, in contrast to warm-reactive anti-HLA antibodies, are associated with a good survival of kidney transplants.

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Breast lumps in adolescent girls

SIR,—I read with interest your leading article on the above subject (4 February, p 260) but must disagree with the conclusions reached.

Over the years I have seen a very large number of such lumps and have always adopted an expectant approach, which you condemn. None of my cases has ever "gone wrong" and in many cases the lump has disappeared and the girl has been saved an unnecessary operation. Whether the fibroadenoma actually disappears or is merely masked by the growth of healthy breast tissue I don't know, but at all events the lump is no longer palpable and that is all that matters. Some 20 years ago, when I started to aspirate breast cysts, I attempted this with several young girls but soon realised that cystic as opposed to solid lumps at this age are a rarity and that attempts to aspirate are not worth while. You quote the case of a girl of 15 with a fatal carcinoma, but does a rarity so great that probably only one in 10 surgeons will see such a case in a surgical lifetime really justify a change of policy? Would earlier diagnosis in this case really have mattered anyway? She may well have been saved at least some of the mutilating surgery, chemotherapy, and radiotherapy that she would certainly have had, and which equally certainly would have made no difference to the ultimate result.

Needless to say I am in complete agreement with your remarks about the asymmetrical