

similar clinical picture can also be produced by adenoviruses. In 11 out of 13 children with a pertussis-like picture Connors *et al*¹ showed adenoviruses and not *Bordetella pertussis* or *B parapertussis* to be the cause. Occasionally an allergic bronchitis may simulate whooping cough.

If, therefore, the actual incidence of whooping cough is lower than that reflected in the notification rates, stress on vaccination may need altering.

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¹ Connors, J D. *et al*, *New England Journal of Medicine*, 1970, 283, 390.

SIR,—A balanced assessment of the present situation in regard to whooping-cough immunisation has been given by Professor G W A Dick (18 October, p 161), and this is most useful to the general practitioner. It tends to be overlooked by contributors to learned journals that any reports of possible risks of immunisation are no longer confined to the pages of these journals but are rapidly disseminated to the lay public by the mass media, in particular, television. Consequently, it is now common for a mother to question her general practitioner on the risks of whooping-cough immunisation before agreeing to accept such immunisation of her infant. The mother's question is usually put simply, "Is the injection absolutely safe, Doctor?" Although one may try to convince her that the risks are small, indeed very small, the simple, honest answer cannot be, "Yes."

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Lung cancer and chronic bronchitis

SIR,—We would like to reply to Dr D Davies (11 October, p 100), Professor C M Fletcher and Dr P E Brown (25 October, p 225), who have commented on our paper (20 September, p 678). Dr Davies is clearly under a misapprehension. Nowhere did we say that "None had detectable cancer when they entered the survey." In fact five of the registry bronchitics had radiological change on first attendance which subsequently proved to be due to lung cancer; none of them had severe airways obstruction. Those with severe airways obstruction did not therefore have "little chance of getting cancer." Nor did we suggest an all-or-none law; we made it clear that 16% of the men presenting with lung cancer had severe airways obstruction. Further, as Professor Fletcher rightly points out, if we use the comparison that Dr Davies suggests in his letter the figures are still significant. Indeed, they become more significant.

We agree with Professor Fletcher about the difficulties of the clinical approach in providing reliable data on the presence or absence of a real association between two diseases, and about his ideal of a prospective study of a sample of the general population to determine the attack rate of lung cancer in men with and without airways obstruction. This would be a major epidemiological task involving life-long follow up. We also agree with Dr Brown about the statistical fallacies which arise in surveys involving subpopulations. However, merely on the basis

of finding only one woman with severe airways obstruction out of all 43 who presented with lung cancer, to which, incidentally, neither Professor Fletcher nor Dr Brown refers, we feel we can suggest that "obstructive bronchitis and lung cancer do not often occur together," and that this is surprising in view of the widely accepted relationship of both to smoking.

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SIR,—The article by Dr M Caplin and Dr Freda Festenstein (20 September, p 678) has aroused considerable controversy. I am, however, concerned that this particular file is not closed without noting three substantial criticisms which have, surprisingly, not yet been mentioned.

Most importantly, the role of emphysema has not been discussed. This disease causes airways obstruction, is strongly related to smoking, and commonly coexists with chronic bronchitis. It may thus be important in producing the severe airways obstruction seen in a smoker with chronic bronchitic symptoms. Assessment of emphysema is not easy, although radiological methods are available. Not to attempt to screen or standardise for emphysema in a project on airways obstruction and chronic bronchitis surely represents a substantial lacuna in the study.

The "lung cancer" patient group consists solely of chest clinic presentations. This excludes patients presenting (a) as emergency admissions, (b) with non-thoracic symptoms, and (c) with thoracic symptoms referred via other medical outpatient clinics. Thus chest clinic referrals are unlikely to give a representative sample of lung cancer presentations.

The "chronic bronchitis" group includes only patients who have had an illness as a result of chronic bronchitis. This method of selection surely biases the selection very strongly in favour of more severe cases. Other variables are introduced such as an individual GP's conception of the role of chronic bronchitis in an illness, his having the time, motivation, and paper form to refer a particular patient, and so on. The "chronic bronchitic" is thus probably also unrepresentative.

The authors raise the possibility that airways obstruction may protect against lung cancer. For an accurate assessment of this idea we must, however, await other studies.

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Adverse effects of oestrogen replacement therapy

SIR,—The investigation by Dr Jean Coope and others (18 October, p 139) appears to settle the long-standing question of whether equine oestrogen is able adversely to influence blood clotting. I have always thought it somewhat paradoxical that oestrogen replacement therapy should produce adverse effects apparently not produced by the endogenous oestrogen, and wonder if the effects on prothrombin time and factors VII

and X might not be dose-related at a level above that needed for relief of symptoms.

Some women certainly seem able to derive long-standing symptomatic relief of menopausal symptoms at a daily dose of 0.625 mg, and others to be able to reduce their doses even to as little as 0.625 mg twice weekly with satisfactory control. Since the dosage used in the trial reported was 1.25 mg daily, I wonder whether it would not be a good plan in future trials designed to monitor the extent of the changes with duration of treatment to use the minimum dose found to produce satisfactory long-term relief of symptoms in each individual patient. One could then decide whether or not equine oestrogens produce the adverse effects described when used therapeutically, rather than whether they are or are not capable of such effects when used at a fixed dosage.

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Trainer-teaching techniques

SIR,—As a trainee at present I read Dr C Josephs's letter (25 October, p 224) with much sympathy, but he must not take things so much to heart. I would think the organisers of his course hoped to learn more from Dr Josephs, with his 30 years of teaching experience, than they taught him. Teachers of GP trainers feel, I think, that GPs in general do not like being told their job by men who probably know no better but who are trying to define what a future GP can be taught as opposed to what he must learn for himself.

Clinical aspects and therapeutics are taught at medical school and perhaps they are of relatively less importance for formal teaching at the trainee stage than the probable first meeting with some of the GP's other roles which I am sure Dr Josephs has been performing well for many years, possibly without thinking too much about it. Our generation hope to acquire some of these skills more quickly than he could with the help of men of such experience as he obviously is.

I am sure he should have said at the course that he was finding it useless and I am also sure that so far as his own trainee goes he can, as a judge of me of 30 years' standing, choose to train the sort of young doctor who will respond to his way of teaching. Variety must remain among GPs. I hope there will always be room for those of Dr Josephs's views as well as those of modern teachers.

B R G FLETCHER

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SIR,—I was glad to see that the "new" teaching methods now in vogue for general practice were being viewed with some scepticism by Dr C Josephs (25 October, p 224). It would seem pertinent to express a view from the other side of the coin.

As a trainee I think that, like the trainers, we are being conned by the charm, intelligence, firmness, and confidence of the super salesmen sent forth from the royal college with the new message. Like all good salesmen they gently but firmly persuade us that we are in ignorance and of course out