represent doctors using the service and are remunerated on favourable terms. We spare no effort to maintain the highest standard and the utmost efficiency.

Dr. Bane expresses a desire for a Government-organized national deputizing service. He must believe either that nationalized services are cheaper or that they are more efficient than those organized by free enterprise. I cannot find any evidence that this is so. Can it be that Dr. Bane fears competition?—I am, etc.,

IVOR M. JONES,
Chairman, Central Advisory Committee,
B.M.A. Emergency Treatment Service.

Frustration in the Hospitals

SIR,—One of the best letters to have appeared in your correspondence columns in recent months was Mr. W. J. W. Sharrard's (16 October, p. 940). It was a superbly worded description of the atmosphere in which all our hospitals have struggled along for years in a climate of chronic starvation of funds. The cheerful good will of their staffs, medical and auxiliary, has been the main factor in preventing the collapse of the whole service before now.

And now many of us are presented with yet another exhortation to be even more economical on the grounds that the "estimates" optimistically made at the beginning of the current financial year have proved to be inadequate to cover the rises in costs of various items. But, we are told, this must be done without any detriment to patients or any limitation of the service provided to them.

When, Sir, will either of our political parties, whether in power or opposition, have the moral courage to tell the people frankly that if they want a twentieth-century health service they must be prepared to pay for it? If they are not prepared to pay through

taxation, then, as Dr. A. L. Bussey so rightly says in an adjacent letter (16 October, p. 940), "The only logical alternative source is the patient at the time." What, for instance, is logical about a situation wherein a patient, hitherto feeding himself while under treatment by his general practitioner, is miraculously given free food the moment his treatment is transferred to a hospital?

In a leading article on 18 July the editor of the *Observer* wrote: "Despite appearances, the Health Service is not an ancient monument, and the worst way of treating the cracks in its walls would be by slapping a preservation order on it." He might usefully have gone on to say, "nor is the doctrine of free-at-the-time necessarily sacred."

It is time that the voices of general practitioners and hospital junior staffs, currently raised in protest, should be joined by those of us senior to the latter in the hospital service. The Treasury may not have the necessary money; the people of the country most certainly do have it in their affluent pockets.—I am, etc.,

Loughton, Essex. DONALD V. BATEMAN.

Specialist Pay

SIR,—Any fears that the Ministry of Overseas Development, in its determination to give the world the benefit of British expertise may be squandering the taxpayers' money, should be put at rest by perusal of the advertisement pages of the issue of 2 October (p. xlv).

In these, the Ministry invites applications for a physician specialist and hospital superintendent for three West Indian islands. Candidates must possess the M.R.C.P. The appointment is for three years, and the salary offered £2,240 per annum.—I am, etc.,

ANTHONY COADY.
Hospital for Tropical Diseases,
London N.W.1.

Bleeding Peptic Ulcer

SIR,—I hesitate to enter into a controversy over this formidable subject (2 October, p. 781), but some comment is indicated. I think that the peripheral hospital patient should receive a more thorough investigation than that used by Dr. Anne Banning and her colleagues, but I do not think that Dr. C. Mailer and his co-workers (2 October, p. 784) have found the best approach for "circumstances when elaborate diagnostic procedures are not possible" (p. 781).

The regimen I have found useful is based on that advised by Tanner¹⁻³ and Capper and Buckler⁴—modified by doing without emergency radiology. In brief the "theatre" cases are selected on standard criteria of continued or recurrent bleeding. They are anaesthetized (cuffed tube), the stomach repeatedly washed out, making every attempt to evacuate clot, and a gastroscopy then done. Further treatment is influenced by gastroscopic findings.

Conservative measures are generally persisted with if multiple erosions are found. Otherwise laparotomy is carried out through a midline incision. I have usually done a partial gastrectomy as advised by Tanner¹ if an ulcer is palpable whether it is acute or

chronic, but am now ready to change my routine for proved acute ulcer cases. However a Billroth-I resection for chronic gastric ulcer whether large or small (and they can be very small) will I am sure still keep its honoured place in surgical practice. If no ulcer is palpable an open search of the stomach mucosa is carried out using a wide-bore Ferguson's speculum (far and away preferable to a sigmoidoscope).⁴

My points of disagreement with the two articles are:

(1) Avoidance of emergency radiology as advocated by Dr. Mailer and his colleagues. This examination is impracticable here owing to shortage of consultant staff. It is certainly useful and I will use it if and when a senior radiological registrar is seconded to us for further training.

(2) Use of gastroscopy, which I understand Dr. Banning and her colleagues avoid and Dr. Mailer and his co-workers deem unsuitable for the average peripheral hospital. The fibroscope has made safe gastroscopy available to all (patients and surgeons) at a price which is moderate in comparison to its usefulness. However, this procedure must carry a risk of pulmonary aspiration if carried out under

local anaesthesia in the ward. It should be done under general anaesthesia in the theatre.⁴

(3) Thorough evacuation of clot from the stomach, which is not dealt with adequately in either of their articles. Gastric aspiration (Mailer *et al.*, p. 785) will remove only liquid blood, gastric juice (I agree we should use gastric secretory studies more often), and gas. It will not remove blood clot.² Good clot evacuation under general anaesthesia is an essential for a satisfactory gastroscopy and sound wound healing.

(4) Finally, Dr. Banning and her colleagues need no longer make excuses for the midline incision—the best approach for gastric surgery whether "hot" or "cold" provided the wound is closed properly.⁵ Where open gastrotomy has been carried out irrigation of the wound with Hibitane (chlorhexidine) is the proper Listerian approach to an operation which cannot be completed without contamination of the wound edges.—I am, etc.,

General Hospital, D. M. HANCOCK.
Sunderland.

REFERENCES

- 1 Tanner, N. C., *Postgrad. med. J.*, 1954, 30, 577.
- 2 ——— *Ann. roy. Coll. Surg. Engl.*, 1958, 22, 30.
- 3 ——— *Brit. J. Surg.*, 1964, 51, 754.
- 4 Capper, W. M., and Buckler, K. G., *ibid.*, 1964, 51, 752.
- 5 Harkins, H. N., and Nyhus, L. M., *Surgery of the Stomach and Duodenum*, p. 697, 1962. Churchill, London.

Upper Gastro-intestinal Bleeding

SIR,—Your otherwise excellent editorial on upper gastro-intestinal bleeding (2 October, p. 769) perpetuates the misconception with regard to the value of radiology in the diagnosis of acute gastric erosions as a cause of haemorrhage. While accepting that many such erosions cannot be recognized by radiological methods, your comment that it is "valueless in the detection of acute erosions" is not justified and is an invitation to overlook certain radiological appearances which indicate gastric erosions.

Unfortunately the conception of an "ulcer niche," such as seen in a chronic gastric or duodenal ulcer, still overrides what should be looked for in gastric erosions.

The modern radiological method of examination of a haematemesia relies on the no-touch technique and the demonstration *en face* of the erosion rather than attempting a profile view. Under these circumstances, whether water-soluble media (Gastrografin) or barium are employed, the erosion appears as a contrast-filled irregular smear breaking the normal rugal mucosal pattern. In other instances the erosion appears as a circular halo—presumably the contrast medium being aggregated around the edge of the erosion.

An appreciation of these appearances will prevent their casual dismissal as being due to "a plug of contrast medium lodged between mucosal folds" and assist in the diagnosis of gastric erosion.—I am, etc.,

Department of Diagnostic Radiology, ERIC SAMUEL.
University of Edinburgh.

Indomethacin and Gastric Ulcer

SIR,—Now that indomethacin has been generally released as a useful drug in a number of the rheumatic disorders it is as

well to appreciate that not only may silent bleeding occur from the intestinal tract—so that patients without dyspeptic symptoms may develop a gradual and insidious anaemia from blood loss—but also large gastric ulcers may appear, also without dyspeptic symptoms, which are often looked upon as possibly or probably malignant from their radiological appearance and the insidious nature of their appearance. I have now seen three such cases, in all of which healing occurred on discontinuing the drug or on transferring to suppositories of the same substance.

Though headaches or a variety of cerebral sensations may occur with indomethacin, these are usually related to dose and disappear rapidly on reduction or stopping of the drug. Dyspepsia or development of the silent ulcer may occur at any time, apparently on any dosage, not necessarily a high one. Though gastro-intestinal, as opposed to cerebral, side-effects are rare, they are much more serious. When surgery is contemplated in addition, as it may be with the pseudo-malignant gastric ulcer if its true nature is not appreciated, the risk increases further. Many, if not most, of the serious gastro-intestinal side-effects reported to date have been in patients receiving corticosteroids as well as indomethacin. The three cases referred to here were on indomethacin only.—I am, etc.,

Westminster Hospital,
London S.W.1.

F. DUDLEY HART.

Whooping-cough

SIR,—The conflicting views of your correspondents on pertussis vaccines are readily explicable with existing data, but the evidence of recent years does not call for complacency regarding either the effectiveness or the toxicity of these vaccines. Dr. Guy W. J. Bousfield (25 September, p. 757) suggested that the epidemic of whooping-cough described by Dr. Allen T. Wilson and his colleagues (11 September, p. 623) was caused by an unusual type of *Bordetella pertussis*. This was not so. It was caused by sero-type 1,3 which is by far the commonest type of *Bord. pertussis* at the present time both in Great Britain¹ and in Canada.² The urgent need is for vaccines which will protect against this sero-type and so save us from the "potentially dangerous situation" of which you gave due warning in your leading article (3 July, p. 2).

There is no need to think of pertussis vaccines as being capable only of reducing the severity of whooping-cough, as suggested by Drs. A. D. Bethune and R. A. Marshall (25 September, p. 757). They can prevent infection completely,² as is shown by the disappearance of type 1,2 strains in this country—strains which have been used, almost exclusively, for vaccine production in the past.

Dr. Bousfield does well to remind us that pertussis vaccines were very effective in 1954. This was at a time when type 1,2 strains predominated and the vaccines were combating infection with the homologous sero-type. The reason why vaccinated children now develop infections (usually mild) is that they have only partial immunity, derived from antigen 1; and there is every reason to believe that if antigen 3 were included in the vaccines these would bestow complete protection against the prevalent strains of type 1,3.

Like Dr. Wilson, I have been assured by a certain manufacturer that type 1,3 strains have been incorporated in their vaccines since November 1963, but examination of eight batches of their vaccine manufactured over the last few years has given the following results with pertussis antibodies 1, 2, and 3: August, October, December 1963, agglutinated readily with antibodies 1 and 2; February, June, July 1964, agglutinated feebly with antibodies 1 and 2; May, June 1965, agglutinated feebly only with antibody 1. In none of these batches was antigen 3 detected. It seems unlikely that such vaccines would give satisfactory immunity against prevalent strains. Moreover, these agglutination results may explain why another of your correspondents has found his vaccines less toxic in recent months—if protective antigens have been lost in the process of manufacture, so also may toxic factors have been lost.

Lest the story should seem too depressing, may I add that at least one British manufacturer is producing a vaccine in which all three major pertussis agglutinogens can be detected? Is it not time to ensure that others achieve a similar result?

Lastly, Dr. R. M. Forrester (24 July, p. 232) and Dr. J. H. E. Baines (4 September, p. 592) are very justified in expressing concern over the toxicity of pertussis vaccines: those who are at present working on this problem should be encouraged to do so with all reasonable haste. However, I know of no reports to suggest that undue toxicity is associated with vaccines which contain the full range of immunizing agglutinogens.—I am, etc.,

NOEL W. PRESTON.

Department of Bacteriology,
University of Manchester.

REFERENCES

- ¹ Report of the Public Health Laboratory, Manchester: City of Manchester Health Department; Department of Bacteriology, University of Manchester. *Mh. Bull. Minist. Hlth Lab. Serv.*, 1965, **24**, 104.
- ² Preston, N. W., *Brit. med. J.*, 1965, **2**, 11.
- ³ Chalvardjian, N., *Canad. med. Ass. J.*, 1965, **92**, 1114.

SIR,—The contribution by Dr. Allen T. Wilson and his colleagues (11 September, p. 623) further confirms the common experience that pertussis immunization is not very efficient in preventing whooping-cough. Likewise that *Bordetella pertussis* can only infrequently be isolated from typical clinical cases.

In a paper read to the Canadian Paediatric Society in Ottawa this summer I reported similar findings in the Red Deer area of Alberta. Out of 56 reported cases 11 had been fully "protected" by the recommended series of injections. Similarly there was a lack of constancy in the response to specific agents—either antibiotic or hyperimmune serum. These findings throw grave doubt on the view canonized in many textbooks that whooping-cough is a specific infectious disease caused by *Bord. pertussis*, and I suggest the use of the term "whooping-cough syndrome." This syndrome characterized by the unfolding over some weeks of an illness in which a paroxysmal cough, usually more frequent at night, often terminates with a whoop, but sometimes with an apnoeic period or with vomiting, may be associated with the following bacteria: *Bordetella pertussis*, *Bordetella paraperussis*, *Haemophilus influenzae*, *Haemophilus bronchosepticus*, and

Brucella abortus. It has also been associated with adenovirus and respiratory syncytial virus infections in personally observed and reported cases, and has been described in infestations with *Toxocara canis* causing visceral larva migrans.

I am at present collecting evidence which I hope will shed further light on this confused area.—I am, etc.,

Red Deer,
Alberta, Canada.

T. J. PARKINSON.

Epidemic "Collapse"

SIR,—The recent outbreak of "collapse" among schoolchildren in Blackburn and Portsmouth has gained the attention of the lay press and has, as usual, been heralded as a new and mysterious disease.

A syndrome consisting of vertigo and nausea with or without vomiting and sometimes associated with diarrhoea became apparent in Reading in August of this year. A small number of cases were followed up to trace any possible clues as to the epidemiology of the disease. This proved to be an unrewarding exercise except to show that only a minority of patients sought the help of their family doctor. So it is probably more prevalent than we think. It would appear that it is only when the disease strikes a community such as a school that it attracts any real attention. Pollock and Clayton¹ reported an outbreak in Coventry schools in January 1964 affecting over 400 children. Other reports are to be found in the literature which indicate that the disease is anything but new, although it remains a mystery. Miller and Raven² describe an outbreak in a girls' boarding school, and Gray³ describes another school outbreak with some associated cases in adults outside the school.

Whether this syndrome is, as some workers believe, a manifestation of winter vomiting disease is difficult to establish without determining the aetiological agent. The rapid spread in a school community is in favour of a viral aetiology, probably droplet borne, but there remains much that is still unknown.

The short duration and absence of complications indicate that this is not a serious disease, but those who have suffered are unanimous in condemning it as a singularly unpleasant malady.—I am, etc.,

M. F. H. BUSH.

Department of Health and Welfare,
County Borough of Reading,
Reading, Berks.

REFERENCES

- ¹ Pollock, G. T., and Clayton, T. M., *Brit. med. J.*, 1964, **2**, 1625.
- ² Miller, R., and Raven, M., *ibid.*, 1936, **1**, 1242.
- ³ Gray, J. D., *ibid.*, 1939, **1**, 209.

Diathermy Burn

SIR,—In the *Annual Report of the Medical Defence Union* there is described on page 46 the case of a patient who sustained a diathermy burn during a surgical operation. It has been brought to our notice, in particular by Dr. C. Langton Hewer, that the description given does not give sufficient detail and could thus be misleading. The object of this letter is to clarify certain points about this particular case.