

just as effective as intravenous prostacyclin in removing the reversible component of pulmonary hypertension in our patients, we regard the use of long term intravenous prostacyclin infusion³ as unnecessary, complicated, dangerous, expensive, and certainly of unproved benefit compared with oral vasodilator therapy.

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- 1 Wagenvoort CA, Nauta J, von der Schaar PJ, Weeda HWH, Wagenvoort N. Effect of flow and pressure on pulmonary vessels. A semiquantitative study based on lung biopsies. *Circulation* 1967;35:1028-37.
- 2 Reeves JT, Groves BM, Turkevich D. The case for treatment of selected patients with primary pulmonary hypertension. *Am Rev Respir Dis* 1986;133:342-6.
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What is a good GP?

SIR,—This series would appear to have touched many a raw nerve. This was to be expected and I shall always remain openminded to informed criticism.

Dr Roger Jones's vehement attack (6 December, p 1503) on my article (1 November, p 1152) seems unnecessarily acerbic. I will confine my reply to three points. Firstly, specialists by definition know more about their subject than general practitioners. Whether or not a GP acts on a specialist's advice may be influenced by an individual patient's circumstances. Foreknowledge of these circumstances by the specialist will make the advice more appropriate and acceptable. Secondly, all radiology departments work to budgetary constraints not imposed on GPs. In discussing cost-benefit analysis in the overall management of the patient, Dr Jones is supporting my case. All I ask is that the reasoning behind each request be communicated. Finally, his last paragraph is misleading. I did not work at this hospital 12 years ago and cannot speak for relationships then. The guidelines issued locally two years ago after full discussion with GP representatives have been generally well received and the regular workshops which I hold for trainees are well attended.

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Corticosteroids and bone mass in asthma

SIR,—Dr D M Reid and his colleagues (6 December, p 1463) express concern because of their finding of a slight reduction of total body calcium (mean of 8.8%) in patients with bronchial asthma treated with conventional doses of inhaled corticosteroids.

They state that only 16 of a small group of 22 patients had been given "booster" courses of oral prednisolone but that this information was "calculated retrospectively from the case records supplemented when necessary by information from the patient." Since many of these patients were under my care I find it embarrassing to have to admit that such precise information is not available from our case records. It is conceivable that these patients had received much more systemic corticosteroid therapy than was apparent from the case records or even from questioning the patients. I believe this to be the case and suggest this as one explanation of the differences in the

total body calcium estimations between patients being treated with low dose inhaled corticosteroids only (group 3) and those in whom corticosteroid therapy of any kind had never been used (group 4). It is interesting to note that the patients who had had no corticosteroid treatment had a mean age of 37.9 compared with 55.6 for the inhaled corticosteroid group. This age difference in itself could at least partially explain the differences between the total body calcium results.

Although I have read this paper many times in draft form and now after its publication I am still unclear about the derivation of the normal range of total body calcium. The demographic details of the 40 controls are not included in the paper, and therefore one has to question the validity of the "normal values." It is of interest to see that the small group of 12 asthmatic patients who had had no form of corticosteroid treatment (according to the case records) was found to have a mean total body calcium value just within the lower limit of the mean control value.

If the finding that total body calcium concentration is below normal in patients receiving only inhaled corticosteroids in conventional doses is correct Dr Reid and his colleagues must be congratulated for drawing our attention to a potential danger to which we are allowing many of our patients to be exposed. However, I do not think that on the present evidence we should have much concern about the use of inhaled corticosteroids in the doses quoted by Dr Reid and his colleagues.

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Neurological and neurosurgical approaches in the management of malignant brain tumours

SIR,—Many patients with malignant glioma in the United Kingdom do not have a histological confirmation of the diagnosis of any treatment other than steroids—a practice which is increasingly at variance with that in North America and Europe. There are few centres in the UK which take an interest in developing treatment, and little of the current literature on treatment comes from Great Britain. Some of the reasons for this are encapsulated in the article by Dr J S Wroe and colleagues (18 October, p 1015). The main conclusion which should be drawn from their report is that a non-randomised retrospective analysis of the value of treatment in which only half the patients in the therapy group were treated and a quarter of the patients in the control group were also treated and where no histological diagnosis was made in half of the control group is unlikely to give a reliable measure of the value of treatment. This would not matter and the analysis could be ignored were it not that therapeutic nihilism in the UK does not need further encouragement.

Tumour diagnosis using computed tomography and the role of free hand biopsy have been examined by other correspondents (8 November, p 1236). We would like to address several additional questions about the paper and the subsequent reply (22 November, p 1373). There is a major discrepancy in the results in the paper. The text refers to only 18 cases surviving three years, but table V lists 27 cases surviving three years, a difference of 50%.

In fig 2 of those receiving radiotherapy almost all underwent surgery, in some cases radical resection, while of those not receiving radiotherapy two thirds did not undergo surgery. The beneficial effects of radiotherapy are probably greater than indicated because the latter group probably contained patients with undiagnosed low grade gliomas, benign tumours, or no tumours. It should be straightforward to decide whether patients who received radiotherapy survived

longer as a result of treatment rather than performance status or age using multivariate analysis. The authors cite a reference of Salzman as support for their contention that radiotherapy has little value.¹ But this is seriously misquoted. Salzman says: "The recent prospective studies of the BTSG [Brain Tumor Study Group] have clearly indicated the value of radiation therapy in prolonging the survival of patients with glioblastoma."² The present analysis of a large population of patients is unequivocal in finding that the addition of radiotherapy is decisive both in producing long term survivors and in markedly improving the survival percentage at intermediate periods during the first 18 months after operation. Withholding radiation treatment from the glioblastoma patient is unwarranted except when special clinical circumstances supervene."

Dr Wroe and colleagues recommend that future trials should include patients treated only with steroids. This has already been done in a major randomised prospective controlled study.³ In this and other trials³ radiotherapy has been shown to be superior to conservative management. There is little point in repeating such work. Furthermore, chemotherapy combined with radiotherapy produces a modest, but statistically significant, further improvement in results.^{4,5} They suggest that controlled trials are unavailable for malignant glioma. Both the EORTC and the MRC are conducting multicentre trials of this type in which several centres in the UK are already participating. Future trials are planned, and if Dr Wroe and his colleagues want to improve the clinical results for glioma it would seem sensible for them to participate in them.

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- 2 Walker MD, Alexander E, Jr, Hunt WE, et al. Evaluation of BCNU and/or radiotherapy in the treatment of anaplastic gliomas. *J Neurosurg* 1978;49:333-43.
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- 4 Walker MD, Green SB, Byar DP, et al. Randomized comparisons of radiotherapy and nitrosoureas for the treatment of malignant glioma after surgery. *N Engl J Med* 1980;303:1323-9.
- 5 Green SB, Byar DP, Walker MD, et al. Comparison of carmustine, procarbazine and high-dose methyl prednisolone as additions to surgery and radiotherapy for the treatment of malignant glioma. *Cancer Treat Rep* 1983;67:121-32.

SIR,—Dr S J Wroe and colleagues suggest that a conservative approach to management of glioma with steroids alone can be justified ethically. Their conclusion is supported by neither their data nor an impressive body of reports indicating that maximally feasible surgical resection followed by radiotherapy (and perhaps chemotherapy) will extend both the duration and quality of life of patients with malignant gliomas.^{1,2} In their study patients of neurosurgeons underwent "craniotomy with biopsy" more often and "no surgical treatment" less often than did patients of neurologists. Shockingly, only 12% of the neurological patients and 7% of the neurosurgical patients received surgical resection. More patients in the surgical group received radiotherapy. More (not statistic-