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CORRESPONDENCE

We may return unduly long letters to the author for shortening so that we can offer readers as wide a selection as possible. We receive so many letters each week that we have to omit some of them. Letters must be signed personally by all their authors. We cannot acknowledge their receipt unless a stamped addressed envelope or an international reply coupon is enclosed.

Extracranial-intracranial anastomosis

SIR,—Your recent leading article "Extracranial-intracranial anastomosis in the treatment of cerebrovascular ischaemia" (7 July, p 2) is a timely introduction of this topic to the more general medical audience. As yet, however, there are relatively few centres in the United Kingdom that undertake this procedure. I know that extracranial-intracranial artery bypass (EIAB) operations are being performed at St Bartholomew's and Charing Cross in London and at various peripheral centres such as Newcastle, Leeds, and Bristol as well as here in Cardiff; but there may well be others and it is important that those who have the undoubted expertise required for the performance of this procedure should be made known to your readers.

Certainly the operation has a high success rate and the morbidity and mortality are low thus making it an attractive proposition. The indications for the operation are becoming more clear cut; for the most part it is used in the surgical management of transient ischaemic attacks and the more prolonged reversible neurological deficits of incomplete completed strokes. Its use for total completed strokes is less well known and the paper by Mr R M Greenhalgh and others (7 July, p 18) is obviously of great interest. It is important, however, to stress the need for most careful preoperative assessment and to recognise that the sooner a firm decision is made after a stroke the more likely is a favourable outcome.

There are, however, other uses for this technique apart from stenosis of the internal carotid artery or indeed the rare middle cerebral artery stenosis. There are cases of aneurism of the middle cerebral artery in which, either because of the size of this aneurysm or because of its premature rupture during surgery, the parent vessel is jeopardised. EIAB at such a time can save the viability of much of the affected cerebral hemisphere. Similarly, with inner third sphenoid wing meningiomas the middle cerebral artery or the internal carotid artery may be partly or completely occluded and an anastomosis immediately after resection of the tumour is of tremendous benefit. There are sure to be an increasing number of circumstances for its use. Since the thalamic syndrome is due principally to the ischaemia of stroke might the anastomosis not be rational treatment for this intractable condition?

With regard to the technique employed, there are several comments worth making. Anatomical studies[1] have shown that the average diameter of the cortical vessels over the angular gyrus is greater than that of those over the anterior temporal or frontal cortex, which should be preferred for EIAB. A 4-cm craniectomy is needed to achieve proper selection of these angular gyrus vessels. Selection of an appropriate part of the superficial temporal artery is also important; atheroma does occur in this vessel and can be seen under the operating microscope. If the superficial temporal artery is thick walled it will not dilate up as satisfactorily, and this may account for the tremendous variation in flow rate recorded by Spetzler *et al*[2] at operation and for the variation in results reported by Greenhalgh *et al*. A good sign of success at operation is what I call the "dumb-bell" sign. The T-junction (end-to-side anastomosis) is relatively narrow after suturing but the cortical artery immediately adjacent on both sides of the junction is dilated for some 2 to 3 mm before returning to the normal diameter of the selected cortical vessel.

The question of regional cerebral blood flow measurements is a difficult one. If only we had a fairly simple standardised technique—but the truth is that until these measurements are standard the regional cerebral blood flow will not be worth very much from a practical point of view in assessing the need for or the result of EIAB. Angiography as yet remains the only truly reliable preoperative and postoperative investigation.

Finally, it is important for the neurosurgeon to have a practice in extracranial carotid surgery and to see and deal with the clinical problems of TIA, amaurosis fugax, and incomplete stroke. Unless he does this his vascular colleagues will unwittingly keep from him a large volume of very interesting and rewarding work which, because of his greater knowledge of cerebral vascular mechanics, should involve him deeply. Surely if the neurosurgeon is to gain experience of this most useful technique he needs to feel at home in dealing with most of the aspects of the surgery of stroke.

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[1] Chater, N L, *et al*, *Journal of Neurosurgery*, 1976, **44**, 712.
[2] Spetzler, R F, and Chater, N L, *Journal of Neurosurgery*, 1976, **45**, 508.

Mission hospital medicine

SIR,—I much enjoyed "Mission hospital medicine" by Dr Anne Savage (14 July, p 111).

I believe that for a would-be consultant physician a spell in a poor country is now unlikely to be counted against her or him in finding a job on return. I date this change of heart to the Rosenheim era at the Royal College of Physicians. A simple publication on a clinical matter is not difficult to achieve under these circumstances and may make up for the shortage of suitable referees.

Working in a country with no luxury resources is likely to make a person critical of waste and pomposity at home and this can only be of benefit to the NHS. The single-minded attention to service necessary under primitive medical conditions is not a bad