parotid tumours are locally recurrent and as such should be treated by radical local excision when first seen, irrespective of its minute histology.

In outline our technique has been as follows, the total operative time averaging 1–1¼ hours. After Blair's skin incision the trunk of the facial nerve is identified ¼ in. (6.4 mm.) below the bony external auditory meatus in the sulcus between the posterior part of the parotid gland and the mastoid process. The main branches are then dissected anteriorly regardless of damage to the gland itself, an adequate margin of normal parotid tissue being removed with the tumour.

None of the 20 cases reviewed has suffered facial palsy, apart from four which developed transient weakness immediately post-operatively, presumably due to neurapraxia. None has recurred in the five-year period under review. No case has developed a post-operative salivary fistula. In only one case was ligation of the external carotid carried out, and this is a practice we have now abandoned.—I am, etc.,

London, W.6. A. M. B. TOMPKIN.

Massive Tumour Embolism

SIR,—Mr. W. R. Probert's case of massive tumour embolism (*Journal*, February 25, p. 435) is most interesting. Some discussion, however, of the histological findings would appear necessary. The photomicrograph (Fig. 4) shows, as he states, a pleomorphic tumour which might equally well be a metastasis from a primary bronchogenic carcinoma rather than a carcinoma of adrenal cortex.

The presentation of an adrenal cortical carcinoma as an intra-bronchial neoplasm must be exceedingly rare, and is surely worthy of discussion.—I am, etc.,

Manchester, 8 R. C. JENNINGS.

Oxygen Masks

SIR,—In their investigation of oxygen masks which permit rebreathing, Dr. J. E. Cotes and Mr. A. J. Merrick (*Journal*, February 4, p. 269) derived gas samples for carbon dioxide analysis from the bag of the B.L.B. assembly. They reported concentrations of around 3% carbon dioxide with an oxygen flow of 3 l./min. and negligible amounts with an oxygen flow of 9 l./min. I have recently measured the carbon dioxide concentrations in both the bag and the mask of B.L.B. equipment worn by a normal subject. The results are recorded in the accompanying table, each value for carbon dioxide representing the mean of from two to four separate observations.

	B.L.B. Mask		B.L.B. Bag	
Oxygen flow rate :	3 l./min.	10 l./min.	3 l./min.	10 l./min.
% CO_2 during inspiration ..	1·9	1·1	2·6	0·3
% CO_2 during expiration ..	4·0	—	3·0	0·5

The point which I should like to stress is the difference between the concentrations in the bag and the mask during inspiration. Whereas in the bag there was a relatively high concentration of carbon dioxide (2.6%) at a flow of 3 l./min. and a negligible amount at 10 l./min., as found by Dr. Cotes, a different situation existed in the mask. The carbon dioxide concentration in the mask was lower than in the bag at 3 l./min. and higher than in the bag at 10 l./min. These differences are presumably determined by the fact that, at low rates of flow into the bag, a significant amount of the inspirate was derived from the air aperture in the mask; at high rates of flow the carbon dioxide in the bag was apparently diluted to a greater extent than that in the mask before the start of each inspiration.

I do not suggest that the findings in this limited experiment can fairly be compared with the results of Dr. Cotes's very careful and thorough investigation. My purpose is simply to draw attention to the fact that, in oxygen equipment of the B.L.B. type, the concentration of gases in the rebreathing bag may not reliably reflect their concentration in the inspirate; in particular, that varying the oxygen flow into the bag may not have as great an effect upon the carbon dioxide content of the inspirate as the changes in the bag concentration would suggest. And finally, the rigidly airtight system necessary for experiments of the type described by Dr. Cotes provides a condition different from that obtaining in the wards, where a perfectly fitting mask is the exception rather than the rule. Under ward conditions it may well be that the original claim by Boothby and his colleagues[1] that carbon dioxide is less than 1% in the total inspirate may not be so very wide of the mark.—I am, etc.,

London, E.1. COLIN OGILVIE.

REFERENCE

[1] Boothby, W. M., Lovelace, W. R., and Uihlein, A., *Proc. Mayo Clin.*, 1940, **15**, 194.

Syncope

SIR,—Professor E. P. Sharpey-Schafer's erudite discussion of syncope (*Journal*, March 3, p. 506) does not include any comment on a common circumstance which may be associated with a propensity to fainting: early pregnancy. At least in novels, such a faint may be the first indication of pregnancy to the woman, as well as to others. It can occur in women not otherwise prone to fainting. There can be little question of pressure on the inferior vena cava reducing venous return.

Could it be that diversion of blood into the enlarging uterus, before the increased blood volume of later pregnancy is established, produces a relatively underfilled circulation which is more than usually sensitive to the usual precipitants of syncope? Or may the dilatation of veins, which is thought to be caused by some hormonal substance, be sufficiently generalized to cause bleeding? It would be interesting to know whether continuous records of such a faint show any unusual feature.—I am, etc.,

London, S.W.10. G. C. R. MORRIS.

Death Penalty

SIR,—I beg to submit six requirements for dealing with psychopathic murderers like Neville Heath; they would, I think, combine humane treatment for the murderer with adequate protection for women and children.

(1) Aggressive psychopaths must not be locked up in an ordinary prison. (2) They must not be treated as dangerous lunatics. (3) There must be no possibility of escape. These three requirements could be met by building a special institution in a large park surrounded by a wide belt of barbed-wire entanglements.

(4) The Rev. Dr. L. Weatherhead wrote in *The Times* of February 14: "I would not let a murderer off with death. He has robbed the community of the life of another. I would make him serve the community in some constructive way for the rest of his own life. . . ." Forced labour would never do in a prison which is half hospital. (5) It is not such a very big step from forced labour to forced castration, and it is even more reprehensible to treat psychopathic symptoms by castration than it would be to treat the dysmenorrhoea of a young girl by hysterectomy. Whatever explanations may be made in Denmark, it must be made perfectly clear in this country that murderers must not be castrated to relieve their symptoms, or for experimental purposes, or with any idea that a castrated psychopath can safely be set free.

(6) Mr. Gerald Gardiner, in the *New Statesman and Nation* of August 20, 1955, quoted the evidence given before the Royal Commission that "many psychopaths mature as they grow older, and, although some might have to be detained for a long time, it is unlikely that there would be many who could not eventually be released without public risk." But that is not to say that women would no longer be a temptation; and it can hardly be said that the psychopath's defences against provocation would ever be as good as those of a normal man. And growing old would not help him. The young women in the Forces can give good evidence about what is normal. They do not talk to eminent Q.C.s—or eminent psychiatrists either, for that matter—but they often