BRITISH MEDICAL JOURNAL

JUL - 1 1969

SATURDAY 24 MAY 1969

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No. 5655 British Medical Journal, 1969, Volume 2, 461–524 Weekly. Price 5s.
BRITISH MEDICAL ASSOCIATION, TAVISTOCK SQUARE, LONDON W.C.1 TEL: 01 – 387 4499

Correspondence

Letters to the Editor should not exceed 500 words.

Pulmonary Blood Flow

SIR,—Professor John Read's article on stratified pulmonary blood flow (5 April, p. 44) was headed "For Debate." In the hope of stimulating some of that desirable activity, may I say that his views, expressed on the basis of a very few experiments and with inadequate control of the many variables, represent to me the kind of ultimate absurdity to which the traditional assumptions of pulmonary physiologists have given rise?

For many decades pulmonary physiologists have simply *assumed* that inspired gases are randomly but equally distributed throughout all branches of the bronchial tree (right down to "primary lobules"), all of which are assumed to be patent unless blocked by the traditional "mucus plug" or as the result of some other disease-process. Similarly, any blood expelled by the right heart is assumed to be passively received by a permanently open pulmonary capillary bed extending throughout the whole organ. It is as if the lung were an engineer's paradise, a wholly mechanical Cartesian construct, prepared to take anything that comes its way, and never reacting in any way that could be called "living."

I have recently presented evidence[1] that the lung consists of a multitude of separate functional units which undergo cyclical activity under neuro-humoral control. I call these units "pneumons," by analogy with the well-known "nephrons" of the kidney. They are formed as discrete anatomical units, but it is not yet clear just how they relate to so-called "primary" and "secondary" pulmonary lobules: a pneumon probably corresponds to what many pathologists call the "acinus," but nomenclature in this area is very confusing. What is clear is that, provided one gets a real biopsy specimen of lung, and fixes it before the variations in this most deformable of all organs have been ironed out, one sees differences in degree of alveolar distension and capillary filling in adjacent pneumons that far outstrip anything alleged on the basis of hydrostatic-pressure effects as between upper and lower lobes.

There is currently a great vogue for hydrostatic pressures among pulmonary physiologists. One might perhaps remind them that, if this kind of "control" of blood-flow were the major one in general biological organization, natural selection would have ensured that our brains were in our feet rather than our heads.—I am, etc.,

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REFERENCE

1 Towers, B., in *The Biology of Gestation*, ed. N. Assali, 1968, vol. 2, pp. 189–223. New York, Academic Press.

Maternal Deaths

SIR,—I have read your leading article "Maternal Deaths" (10 May, p. 332) with interest, but I do not agree with the implication contained in the third paragraph, that improvement in perinatal mortality figures results from the increase in ratio of hospital to domiciliary confinements.

It may appear to be the case from the statistics, for these can be made to say anything, but from personal experience we in Ipswich can show a consistently good record over the years when about half of confinements are conducted at home and a further 25% are conducted in the maternity home under the care of their general practitioners, and only 25% are conducted in hospital, the last being the high-risk group and the potentially and actually abnormal cases. For example, the perinatal mortality last year was 20/1,000 as opposed to the national average of 25/1,000.

I think the wrong conclusions are being drawn because the information on which they are made is incorrect, or because there are areas where, as the leader points out in paragraph seven, there have been failures that have led to the 56% avoidable factors. We consider that these failures and avoidable fatalities can and should be overcome by good teamwork by all concerned, and that such teamwork can and does in our case give good results with a high rate of 75% domiciliary and general-practitioner maternity home care.

We consider that the activities of our consultant colleagues should be reserved for the cases where their expertise is really required, and that to overload the work on them will inevitably lower their standards.

It is the policy of the local medical committee that doctors aim to be present at every confinement, and under the aegis of the maternity liaison committee every perinatal mortality in the borough, whether it occurs in hospital, maternity home, or the patient's home, is discussed by the consultant, the general practitioner, and the midwife concerned, under the chairmanship of the medical officer of health. This discussion is regarded as a clinicopathology meeting and not a "star chamber," and any lessons learnt are noted. I think it would be fair to comment that the percentage of avoidable fatalities has been about 10. The salient points of the discussion on each mortality are sent to all practitioners for their information.

On the evidence we think that this type of liaison together with proper selection of cases can lead to high standards of midwifery