## **Correspondence**

Correspondents are asked to be brief.

Responsibilities of Doctors and Midwives	Ergotamine Tartrate in Migraine	Cost of Treatment		
H. G. E. Arthure, F.R.C.O.G790	R. T. D. Fitzgerald, M.B792	A. J. Jouhar, M.B794		
Serum Creatine Kinase Levels	Treating Trichomonal Vaginitis	<b>Primary Medical Care</b>		
A. E. H. Emery, M.D., and A. M. Spikesman 790	M. Arnold, M.D.; I. Sagone, M.D	Р. I. Banky, м.в		
Nasal Cancer in the Shoe Industry E. D. Acheson, F.R.C.P., and others791	Pre-ulcerative Buruli Lesions I. Phillips, M.R.C.PATH	The Government and the Review Body A. J. Moon, M.R.C.P.; R. P. Hendry, M.R.C.S.; A. C. D. Brown, M.B.; D. A. Prater; M. S.		
Breathlessness and Anxiety H. B. McNamee, M.R.C.P.ED., D.P.M791	Sleep and Drug Overdose J. M. Macgregor, F.R.C.P., D.P.M	King, F.R.C.S.; M. J. Illingworth, M.B.; S. K. Hardy, M.B., W. R. Moore, M.B.; R. R. Watkin, F.F.A.R.C.S.; G. K. M. Drown, M.B.; I. G. Schraibman, F.R.C.S795-797		
Neurological Complications of Infective	Susceptibility to Aspirin Bleeding	Unexpected Bonus		
Endocarditis	G. F. Blane, PH.D., and G. R. Fryers, M.D 793	H. M. Rose, M.R.C.S.; P. Graham, M.B.,		
J. S. Garfield, F.R.C.S	Pseudo-obstruction of the Large Bowel	and others		
Soya Milk T. P. Eddy, D.P.H	Julian A. C. Neely, F.R.C.S	Private Practice Betty D. Scott, M.B		
Child-resistant Containers	R. I. W. Ballantine, F.F.A.R.C.S.;	Earnings-related Pension Scheme		
D. H. S. Reid, M.D	S. Selwyn, M.D	A. B. Davies, M.B		
War Surgery in Nigeria B. S. Crawford, F.R.C.S	Disposing of "Disposables" E. H. Compton, M.R.C.S	Trainees for General PracticeD. F. Grant, M.B		

## **Responsibilities of Doctors and Midwives**

SIR,-In June 1967 the Central Midwives Board issued a statement concerning the performance of episiotomies by midwives, in which it was stated that suture of the perineum should normally be referred to a registered medical practitioner.

The Central Midwives Board is required by Statute to make rules regulating and restricting within due limits the practice of midwives, but it does not wish to stop them performing those minor obstetric procedures which the medical profession feel they are competent to do. The welfare of the patient is the first consideration. Although suturing is still regarded as the responsibility of a

doctor, circumstances may be such that a doctor is not readily available to carry out this procedure, whether in hospital or in domiciliary practice.

It is the view of the Board that midwives who have been taught the technique of repairing the perineum, and are judged to be competent, may be authorized by the doctor concerned to carry out this procedure; the final responsibility will rest with the doctor.-I am, etc.,

HUMPHREY G. E. ARTHURE, Chairman, Central Midwives Board. London S.W.7.

## Serum Creatine Kinase Levels

SIR,-We read with interest the article by Drs. A. F. Smith and others (11 April, p. 86) on clofibrate, serum enzymes, and muscle pain. While studying the effects of the drug clofibrate on serum enzymes they noted that two healthy males among their control group had levels of serum creatine kinase which could be considered pathological. The authors pointed out that if these two men had been in the treated group, these findings might have been attributed to the effects of clofibrate.

Other investigators have also noted that in the general population certain normal healthy males may have elevated serum kinase levels during everyday creatine activity.1 The results of our own studies suggest that these findings cannot be explained purely on the basis of physical activity and that some healthy males have high serum creatine kinase levels even at rest.<sup>2</sup> It has been suggested by Griffiths<sup>1</sup> that children and young adults are particu-larly likely to be "enzyme-labile"; however, out of 18 healthy subjects whom we found to have elevated serum creatine kinase levels on at least one occasion, six were over 45 years of age.<sup>2</sup>

It has been suggested that healthy individuals with raised serum creatine kinase levels may represent a subclinical form<sup>3</sup> or heterozygous manifestation<sup>4</sup> of certain types of muscular dystrophy. The results of our own studies make this seem unlikely.<sup>2</sup> Another possible explanation is that healthy individuals with raised serum creatine kinase levels may be predisposed to the condition of malignant hyperpyrexia following general anaesthesia.56 This may be so in certain individuals, but so far we have found no instances of deaths due to malignant hyperpyrexia in several healthy males with consistently raised serum creatine kinase levels nor among their relatives.

It has been suggested that all individuals who are to have general anaesthesia might be screened by a serum creatine kinase determination.6 However, our own findings

indicate that at least some healthy males with raised serum creatine kinase levels apparently are not predisposed to malignant hyperpyrexia.

Individual variation in serum creatine kinase levels might be due to varying concentrations of a serum creatine kinase inhibitor,7 but recent evidence makes t

TABLE.—Survival after General Anaesthesia in Healthy Males with Raised Serum Creatine Kinase Levels and their Relatives

Index Cases		Relatives						
		1st degree		2nd degree		3rd degree		
T 10	Op 5	T 54	Op 19	T 91	Op 6	T 78	Op 4	

(T = total; Op = individuals who have had general anaesthesia).

seem unlikely. Elevated serum creatine kinase levels during everyday activity may be a reflection of normal variation in the permeability of the muscle membrane or of individual variations in the enzyme itself. These possibilities are being further investigated.—We are, etc.,

A. E. H. EMERY A. M. SPIKESMAN.

Department of Human Genetics, University of Edinburgh.

## References

- Griffiths, P. D., Clinica Chimica Acta, 1966, 13,
- Griffiths, F. D., Cinica Chimica Acta, 1966, 15, 413.
  Emery, A. E. H., and Spikesman, A. M., Journal of the Neurological Sciences, 1970, 10, 523.
  Richterich, R., Rosin, S., Aebi, U., and Rossi, E., American Journal of Human Genetics, 1963, 15, 133.
- 133.
  Milhorate, A. T., and Goldstone, L., Journal of the American Medical Association, 1965, 194, 130.
  Isaacs, H., and Barlow, M. B., British Medical Journal, 1970, 1, 275.
  Denborouch, M. A., Ebeling, P., King, J. O., and Zapf, P. Lancet, 1970, 1, 1138.
  Thomson W. H. S., Clinica Chimica Acta, 1969, 23, 105.

- 23, 105. Spikesman, A. M., and Brock, D. J. H., Clinica Chimica Acta, 1969, 26, 387.