

Splenectomy and Susceptibility to Malaria and Babesia Infection

SIR,—The article by Dr. A. S. D. Spiers and others (25 January, p. 175) calls for special consideration concerning susceptibility to malaria and infection with some species of babesia in patients who have undergone splenectomy for haematological disorders.

Research work on apes and monkeys has shown that when these animals have acquired immunity to malaria they can be reinfected with the same strain of the same species of parasite if, before reinfection, the spleen is removed. It has also been proved beyond all doubt that some species of apes (chimpanzees), which normally are resistant to human *Plasmodium vivax* infections, develop severe parasitaemia if, before infection, the spleen is removed. Humans who have had their spleens removed should, if possible, avoid going to endemic malarious areas, especially areas where *P. falciparum* is prevalent. Few if any splenectomized Caucasians would survive for more than two weeks if infected with *P. falciparum* and not given antimalarial drugs within a few days of infection.

There have been fatal cases of babesia infection in nature among humans who have been splenectomized, in both Europe and North America. As far as is known only one case (fatal) has occurred in the U.K. A few years ago an inshore fisherman who had lost his spleen developed fever while on holiday. On admission to hospital his blood was examined and numerous erythrocytic parasites were found which were diagnosed as *P. falciparum*. Antimalarial drugs were given but the patient did not respond and died. Blood films were sent to the Malaria Reference Laboratory, at Horton Hospital, Epsom, where it was recognized that the parasites were not malaria. When the films were shown to Professor P. C. C. Garnham he diagnosed *Babesia divergens*.^{1 2} The parasites of this species of babesia so closely resemble *P. falciparum* that it takes an expert to distinguish one from the other.

Babesia infection (known to farmers as red water fever) among cattle is common in many parts of the U.K.; in one part of east Devon a farmer informed me that all his cattle sooner or later became infected. It therefore behaves farm workers, veterinary surgeons, and others who have had their spleens removed to avoid being bitten by ticks. It would certainly be inadvisable for people from the U.K. who have undergone splenectomy to go for holidays in tropical Africa.—I am, etc.,

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¹ Garnham, P. C. C., et al., *British Medical Journal*, 1969, 4, 768.

² Shute, P. G., and Maryon, M., *Laboratory Technique for the Study of Malaria*. London, Churchill, 1966.

Surgery in Rhodesia

SIR,—One cannot help but conclude that Professor L. F. Levy's Personal View (18 January, p. 147) is resigned to two standards of surgical management (in whichever hospital he is working in Rhodesia)—one for the affluent and the other for the rural Africans. If that be the case what he calls exotic treatment, which is also expensive, is almost all reserved for the 300 000

Europeans who happen to be the affluent members of society and make up only 5% of the population.

Just because the rural Africans cannot afford to travel long distances for follow-up is no justification for offering them second-grade surgical procedures almost doomed to fail. One would have thought that, rather than maintain the status quo, measures should be taken to encourage and assist the rural population to attend follow-up sessions after complicated and costly operative procedures.—I am, etc.,

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Inhibition of Prostaglandin Biosynthesis by Analgesics in Relation to Asthma

SIR,—The demonstration by Dr. A. Szczeklik and his colleagues of the in-vitro inhibition of prostaglandin (PG) synthesis by aspirin (11 January, p. 67) is supported by our finding that during asthmatic attacks precipitated by aspirin only trace amounts of PGE and PGF_{2α} are present in the plasma.¹ However, their suggestion that the precipitation of asthmatic attacks in analgesic-sensitive patients is related to each analgesic's ability to inhibit PG synthesis should be accepted with reservation.

Though, in their experience, paracetamol did not inhibit PG synthesis it is capable nevertheless of producing asthmatic attacks. Smith² observed marked falls in the FEV₁ in five aspirin-sensitive subjects exposed to paracetamol. Similarly the increased airways obstruction observed in 13 aspirin-sensitive patients after I had challenged them with 1 g of paracetamol is shown in the table.

Patient No.	FEV ₁ %	
	Before Challenge	After Challenge
1	59	49
2	84	69
3	63	45
4	70	52
5	76	52
6	51	33
7	61	49
8	91	77
9	49	39
10	91	73
11	41	34
12	63	55
13	81	64

It should be emphasized once more that patients with aspirin idiosyncrasy need to treat all analgesics with caution.—I am, etc.,

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¹ Delaney, J. C., Smith, J. B., and Silver, M. J., *Postgraduate Medical Journal*, 1975, 51, 15.

² Smith, A. P., *British Medical Journal*, 1971, 2, 494.

Patient-satisfaction in General Practice

SIR,—The survey of patient-satisfaction carried out by Mr. P. R. Kaim-Caudle and Dr. G. N. Marsh in a Teesside practice of 3100 patients (1 February, p. 262) is a good example of how emphasizing certain aspects of statistical results can give rise to a misleading picture.

The authors are pleased at the high level of satisfaction shown in this practice, where half the visiting is done by the practice

nurse. Approximately one-sixth of the adult practice population were interviewed by a non-medical research team and 92% were either "very satisfied" or "satisfied" with the treatment they received from their doctor. However, one patient was "very dissatisfied," five were "dissatisfied," and 20 had "mixed feelings." If the sample is typical of the whole practice population this means that at least 30-40 adult patients are dissatisfied and between 100 and 150 more have mixed feelings about the treatment they receive from their doctor. Many general practitioners would be absolutely horrified if they knew that such a large number of their patients had such reservations about their treatment.

I do not think that this survey has helped to prove the authors' theory that the average list of 2400 patients is too small, and I await with interest the results of a similar survey in a practice with a list of 2000 patients where the doctor does his own visiting.—I am, etc.,

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Lithium Poisoning Precipitated by Diuretics

SIR,—The toxic effects of high serum lithium levels are well known, but their precipitation by diuretic medication, while recognized, is probably not so widely appreciated. The following short history illustrates the dangers of prescribing diuretics to patients taking lithium without careful alteration of dosage requirements.

The patient was a 66-year-old man with a past history of severe manic depressive psychosis dating back to 1960. He had been well controlled on lithium carbonate since 1972 and the serum level had been steady on regular estimations.

In August 1974 he was started on Moduretic (amiloride hydrochloride 5 mg + hydrochlorothiazide 50 mg) because of left ventricular failure associated with hypertension and E.C.G. evidence of myocardial ischaemia. One week later he was referred to this hospital urgently because of unsteadiness on his feet, slurred speech, and shaking of the upper limbs which had become progressively more severe since taking the diuretic. There was no vertigo, diplopia, or tinnitus but he complained of general malaise, anorexia, nausea, and diarrhoea over the previous 5 days. There was a complex coarse tremor with gross movement of the upper limbs, a mixed peripheral tremor involving individual digits, and occasional flapping elements. There were no other abnormal findings on further neurological examination. His serum lithium level was found to be 2.4 mmol (mEq)/l.

All medication was discontinued but two days later there was no clinical change. Four days after that there was a considerable improvement, but return to normal function was slow, and seven weeks after his deterioration there was still slight evidence of slurred speech, tremor, and ataxia.

The major points which should perhaps be stressed in this history are the rapidity of onset of the symptoms, the slow return to normal function, and the present problems related to persuading the patient to recommence a drug which he rightly believes could have killed him.—I am, etc.,

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Amitriptyline and Imipramine Poisoning in Children

SIR,—Drs. D. A. Price and R. J. Postlethwaite (23 March, p. 575; 1 June, p. 504) have recommended the use of parenteral diphenylhydantoin in preventing and con-