the ensuing five years, the decision as to the efficacy of the remedy being left to the Royal Colleges of Physicians and Surgeons of London. The medical profession is, I believe, grateful to the generous donors, who have modified the conditions originally imposed, so that now successful cancer research workers may receive rewards so far as these funds go.

The donors made their gifts in the confident hope that the rewards would be earned. The conditions at first attached were such that it is all but morally certain that the donations would have lapsed. It is more than likely that the limitation originally imposed in regard to the method of cure would have militated against the acquisition of the reward. It is possible that in the course of investigation some fortunate worker may discover a method of arresting the development and extension of cancerous growths without actually finding a means of eradicating them; an inquirer whose work led to this would be immortalized, and, although deserving of the highest reward, would have had no claim for any part of the gifts under consideration. The introduction of a time limit to the discovery of a cure was another serious drawback to the proposed reward.

In a morbid process so protean in its nature and so shrouded in mystery as cancer it seems problematical if anything would be achieved by the empirical use of one remedy after another in search of a cure, though it is just within the range of possibility that some such remedy may be found by a stroke of luck.

It would be a more promising investment as regards discovering a remedy to make all such gifts to cancer research institutions with well-founded reputations, such as the laboratories in the Middlesex Hospital and the Cancer Hospital, the funds so allotted being used in any way the directors of these institutions considered best. Those who have devoted a good part of their lives to the investigation of all phases of the cancer problem are more likely to know the most useful way of using such funds. Perhaps an increase in the number of cancer research scholarships is one direction in which further hope lies. It would appear that if ever a cure is found for cancer it will only be by patient and persevering inquiry carried out probably over a long period. Another means of helping in the finding of a cure would be that of giving prizes to persons who had advanced our knowledge of the etiology and pathology of cancer or elucidated any phase of the cancer problem that opens out a hope of discovery of a cure in the future. The adjustment of claims in these directions would be extremely difficult and probably could only be carried out equitably by cancer experts of the highest reputation.

Where the object is to reward individual merit in cancer research work I should be disposed to advise the creation of a special fund from which any Britisher (including workers in the Dominions overseas) who has advanced our knowledge in connexion with cancer in a practical way would receive a reward. This reward might take one or more of several forms—prizes, scholarships for investigation to be renewed in cases in which the work done is promising, and in other ways. I should make this into a specific cancer research reward fund, and keep it quite distinct from other allotments in connexion with cancer work.—I am, etc.,

P. HEHIR,

Westward Ho, N. Devon, Feb. 7th.

Major-General I.M.S. (ret).

GLYCOSURIA OF MALARIAL ORIGIN.

SIR,—When Dr. Harrison (BRITISH MEDICAL JOURNAL, October 22nd, 1921, p. 630) states that he prefers the diagnosis "Glycosuria of malarial origin" to that of "Very mild diabetes mellitus in a malarial subject," one naturally asks, Why not adopt the non-committal diagnosis of "glycosuria in a malarial subject"? In that case there might not be much reason to object, although, by the way, it is hardly proved that the individual in question ever had glycosuria. It is stated that sugar was found in his urine while he was in India, but the tests employed are not indicated. In England "glucose" was apparently found once only in his urine, in very small quantity, and even then the reader is left in doubt as to whether the reducing substance was "glucose," as no gas was produced by the fermentation test and no polariscopic rotation was observed. As to the malarial origin, no proof whatsoever is given. The individual had suffered from malaria, but no connexion between the two conditions is shown. On the other hand, there was a history of diabetes in his family.

The question whether glycosuria may be due to malaria

infection is very interesting, but by no means new. It is surprising that Dr. Harrison has not found any reference to this matter in textbooks, as practically all books on malaria or tropical diseases in general deal with it. It has been asserted by some writers that glycosuria is of very common occurrence in malaria, but most recent authors are of opinion that the opposite is the case; in several well-known books it is stated that reducing substances are often found in the urine, and that their presence may have given rise to the erroneous diagnosis of glycosuria.¹ Laveran, Ziemann, and others, are of opinion that no causal connexion has been proved to exist, but a few authors give histories of cases in which it might be suspected. An interesting case is that described by Naunyn² in which there is a full clinical observation of the diabetes and a reasonable suspicion that malaria might be the etiological factor. Still more interesting are the two cases published by Castellani³ in which the diagnosis rests essentially on the fact that a cure was effected by the administration of quinine without any dietetic treatment.

This is scanty material on which to build any theory as to the nature of such a causal connexion. As Naunyn suggests, the frequency of liver affections and the likelihood of pancreatic affections in malaria would make one think of malaria as an etiological factor in diabetes, but the rare co-incidence of the extremely frequent disease malaria and the not uncommon condition of glycosuria tends to dismiss any idea of its being a factor of importance.

During a fairly long tropical experience in various parts of the world I remember no cases of glycosuria in which I had reason to suspect malaria as the cause. On the other hand, I can fully confirm the observations just mentioned on the frequent occurrence of reducing substances in the urine, other than glucose, with the qualification that I have frequently observed reduction of Fehling's solution in the urine of Europeans in the tropics whether they had suffered from malaria or not. This is not at all surprising considering the frequently increased concentration of the urine, owing to excessive perspiration.—I am, etc.,

HARALD SEIDELIN,

Médecin principal des Huilleries du Congo Belge.

Kinshasa, Belgian Congo, Jan. 9th.

TREATMENT OF SQUINT.

SIR,—It may interest Colonel Henry Smith, of whose hospitality and work at Amritsar I have most pleasant recollections, to hear that work on somewhat similar lines is being carried on in my clinic at the Western Ophthalmic Hospital.

I use a faradic coil, kindly lent me by X-Rays, Ltd., which is a modification of the Bergonié apparatus, designed particularly for the treatment of small surfaces. By means of a sliding coil and a switch controlling the voltage, four different voltages may be used; the interrupter is designed to give a fine wave form of current, gradually varying in intensity, and the speed of the impulses can be adjusted as required.

I have been impressed with the fact that success in advancement operations, other things being equal, is proportional to the development of the advanced muscle. If the muscle—for example, the external rectus in convergent strabismus—is thin and badly developed, a poor result may be anticipated, and I was consequently led to try to improve the nutrition of the muscle by regular electrical stimulation before operation. The passage of the impulses is not attended with much pain, but is extremely unpleasant, though I have not seen vomiting or other disagreeable after-effect. My results so far have not been satisfactory, largely perhaps because I have not yet succeeded in finding the most suitable form of electrode.—I am, etc.,

London, W., Feb. 7th.

A. RUGG-GUNN.

SPINAL ANALGESIA AND GENERAL ANAESTHESIA.

SIR,—In the BRITISH MEDICAL JOURNAL of January 28th, p. 165, Dr. Battye refers to "local and spinal analgesics which at one stroke abolish nearly all the dangers and disadvantages of general anaesthetics, whether new or old." As Dr. Battye was referring especially to ethanesal, of which I have had some experience, may I be permitted to suggest that his remarks require some qualification?

¹ See, for instance, Mannaberg-Stephens, "Malaria," in Nothnagel's *Encyclopaedia*.

² *Diabetes Mellitus*, 1905.

³ BRITISH MEDICAL JOURNAL, August 20th, 1921.