of diagnosed infections, let alone those that have not been detected. More serious is the fatality rate in people with *P. falciparum* malaria. Since 1954 at least 60 people have died in Britain owing to the belated diagnosis and difficult treatment of severe cases of falciparum malaria. The patient may deteriorate fast within a few hours of the first symptoms. In the Netherlands,[16] out of 140 patients with falciparum malaria seen between 1956 and 1967 10 died of cerebral infection.

Information from other European countries, and especially from Germany[11] and France,[17] confirms the disturbing lack of awareness among medical practitioners and among the general public of the frequency of imported tropical disease, the best means of its easy prevention, and of the need for its early detection and treatment. Much credit for stimulating a higher level of vigilance among the medical profession must go to the Royal College of Physicians of London,[18] while the Ross Institute continues to inform and advise the public at large through its useful publication.[19]

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The Liver and Erythropoietic Protoporphyria

Erythropoietic protoporphyria is an inborn error of porphyrin metabolism characterized clinically by photosensitivity and identified by an excess of protoporphyrin in the erythrocytes, sometimes in the plasma, and often also in the stools. The porphyrin in the urine is normal. Characteristic histological changes are found in those parts of the skin exposed to light.

The condition was first clearly defined in Britain by I. A. Magnus and his colleagues in 1961[1]; similar observations had been made by W. Kosenow and A. Treibs[2] in 1953. In 1963 B. Haeger-Aronsen[3] suggested that transmission was by an autosomal dominant gene, and later reports have confirmed that view.[4] The disease is now known to be one of the commoner forms of porphyria.[5]

Photosensitivity is experienced as a burning sensation. Usually beginning in childhood, it is associated with diverse physical signs in skin exposed to sunshine. C. Rimington and his colleagues[6] stated that such disability as erythropoietic protoporphyria causes is virtually confined to the effects of photosensitivity. But subsequently H. D. Barnes and colleagues[7] reported a fatal case of liver failure with massive deposits of protoporphyrin in the liver in which a diagnosis of erythropoietic protoporphyria was made at necropsy. Before this liver and biliary disease had been observed by a number of workers,[8-11] and the occurrence of gallstones at a younger age than usual was noted.[1 3 6 12-14]

E. M. Donaldson and colleagues[15] have now reported two deaths from hepatic cirrhosis due to erythropoietic protoporphyria in men aged 56 and 58 years, and they mention two additional patients—a young woman and a boy aged 8 years. The salient features in their fatal cases were many years of photosensitivity during which the patients were in good health, then sudden onset of jaundice and epigastric pain. Surgical exploration showed smooth hard livers of dark olive green colour, with normal gall bladder, ducts, and pancreas. Both patients went rapidly downhill. One died from massive haematemesis from oesophageal varices; the liver showed micronodular cirrhosis, with massive deposits of protoporphyrin. The other lapsed into fatal hepatic coma.

Much of the protoporphyrin in this disease is[15-17] synthesized in the liver, passes to the plasma, and is taken up by red cells. Presumably protoporphyrin accumulates in the liver until a critical point is reached and irreversible changes occur. The liver damage itself then leads to increasing retention of protoporphyrin. Most of the commonly used tests of liver function do not show up this damage, and the bromsulphalein retention test is essential. Monitoring of protoporphyrin levels in the plasma or erythrocytes might also detect impending liver failure.

It is well to consider the possibility of this disease in patients with unexplained jaundice, hepatomegaly, or abdominal pain. A simple question about photosensitivity may afford a vital clue and laparotomy be avoided. As the clinical picture may be mimicked by non-porphyric dermatoses,[18] a firm diagnosis requires chemical confirmation of excess protoporphyrin in the blood and stool. Simple screening tests usually suffice for this.[19] Certain drugs are entirely contraindicated for patients with the hepatic porphyrias—notably barbiturates, sulphonamides, oestrogens, oral contraceptives, griseofulvin, and chloroquine—and the same advice shoud be extended to patients with erythropoietic protoporphyria.

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