

Snail Fever And Cancer

by Didier Henrioud

CHILDREN are fascinated by water everywhere in the world, especially in warm countries. No sooner are they old enough to walk than they go for any water in sight. They gather on the banks of the river, the lake or the canal where they enjoy playing with water, swimming, fishing or helping grown-ups in one of the many different tasks for which water is essential.

And there you have the start of the schistosomiasis drama. This disease, also known as bilharziasis or snail fever, affects some 200 million people living in tropical or semi-tropical areas of the world such as Africa, the Middle East, the Western Pacific and Caribbean regions and the northern part of South America.

In Egypt, for instance, the disease has existed on the banks of the Nile for thousands of years. The Egypt of the Pharaohs apparently had it and today it must be counted one of the country's major health problems. Of Egypt's 30 million people, about 16 million are infected.

The disease is propagated and perpetuated largely by man himself. He is the principal reservoir of the parasite, a little worm or blood fluke called schistosome, living in the veins of human beings. The eggs laid by these flukes produce lesions in the organs where they lodge. The most common complications affect the intestine, the bladder and the liver. The eggs leave the body with urine and hatch in water, and as the next stage in this complicated life cycle, the liberated larvae enter a freshwater snail. After several weeks, free-swimming larvae emerge from the snail and penetrate the human skin while the person is wading or swimming in water. The parasites which enter the blood-stream are carried to blood-vessels of the liver, develop to maturity and then migrate to veins of the abdominal cavity. It is sufficient for the urine

of one sick person to reach a water-way inhabited by suitable snails for the disease cycle to start again. All along the fertile Nile Valley innumerable villagers have a hundred uses for the river itself and its adjoining canals, and generally do not take any precautions.

A mass disease such as schistosomiasis has tremendous economic repercussions. In a report presented to the first African Symposium on Schistosomiasis, which was held in Cairo in 1969, an Egyptian expert, Dr Khalid El-Hadidy, indicated that the mere fact of treating cases of schistosomiasis among the workers of a soap factory made it possible to reduce manufacturing errors by 25 per cent and absenteeism by 37.5 per cent and to increase production by 12 per cent.

The disease is being attacked at a number of different points. Various methods including molluscicides are used in the canals to eliminate the snails, patients are treated, great efforts are made to educate the public about the mode of transmission of the disease, and so on.

Cancer link ?

The action of the parasites may however not be limited to classical

Rumanian Vaccine for Cancer

A Rumanian cancer expert is reported to have developed a vaccine capable of halting the spread of cancer in the most difficult cases.

The Bucharest Anti-Cancer Institute has successfully tested it in 158 serious cases of cancer which could not be treated by radiation, chemotherapy or surgery.

The vaccine is produced by injecting human cancer cells into a laboratory animal. An anti-cancer serum is obtained which in turn is injected in vaccine form into the patient. It produces a duel between cancerous and healthy cells and the latter develop an energetic resistance to the disease.

schistosomiasis. Egyptian doctors and research workers suspect that there may be a direct relation between the disease and cancer of the bladder.

At present this is only a hypothesis and opinions still vary widely. Schistosomiasis, however, undoubtedly causes a constant irritation of the mucous membranes of the bladder.

It has even been asserted—by Dr Maged, Dr Mahfouz and Dr Morgan in a report published in Cairo—that “in Egypt there is a very close relationship between bilharziasis and cancer of the bladder. Accumulating data have shown that there are certain important differences in the behaviour of cancer in bilharzial bladders as compared to other bladder cancers.”

Epidemiological studies carried out in the United Arab Republic strengthen the theory establishing a link between schistosomiasis and cancer of the bladder. These studies show that the geographical distribution of cancer of the bladder in Egypt follows a similar pattern to that of schistosomiasis. An important drop in the incidence of schistosomiasis between the year 1934-1950 brought about a corresponding drop in the number of cases of bladder cancers.

Cancer of the bladder appears approximately 10 years after the beginning of infection by schistosomiasis. It is also established that the simultaneous incidence of both diseases decreases gradually after the age of 40, as opposed to other cases of bladder cancer when incidence increase with age.

In Egypt, bladder cancers number about 8 per cent of all cancers.

Research into these questions is being pursued at the Alexandria Institute for Medical Research and at the Institute for Schistosomiasis Research of Cairo University. A new cancer institute has just been completed on the banks of the Nile in Cairo. In Egypt, beset with special disease problems of its own, the new institute has an important part to play in cancer research and in promoting the early diagnosis and treatment of the disease.

(Courtesy WHO)