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PUBLIC HEALTH ASPECTS OF TOURISM IN THE MEDITERRANEAN

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Is the tourist who ventures to the shores of the Mediterranean exposing himself to greater health hazards than those he meets in his normal environment? Obviously the answer depends on the country he comes from, the country he visits and on his behaviour therein. For the purpose of this paper I will assume we are dealing with the traveller from Britain, a convenient country to choose if for no other reason because of its high standard of health and hygiene. As for the visited place, we are dealing with the Mediterranean countries and these vary enormously. It is no truer to say that typhoid starts at Boulogne than that the niggers do so and I believe many persons have an exaggerated idea about the dangers of town life in Europe. I have been often asked about the safety of tap water in Malta and have been glad to be able to reassure the questioner. Our tap water is hard, it may be salty, the tea connoisseur may consider it unsuitable for a good brew (I knew a pathologist who used distilled water every time), but normally it is perfectly safe. This undoubtedly is the rule for every large town in Europe. Me must, however, bear in mind that the Mediterranean has also a Southern, which is an African coast and that this is becoming increasingly popular with tourists.

The third factor, the tourist's own behaviour, is perhaps the easiest to understand. The holiday maker wants his holiday to be a success and a change in his psychology to a euphoric one comes over as soon as he enters Victoria Station or settles himself in an aircraft. A holiday has to be bad indeed for the average tourist to be forced to admit the fact. It is a good thing for the normal fault-finding citizen to discard this habit which so often spoils his pleasure at home but, like everything else, it can be carried to extremes. I have seen walkers along a mountain side drinking from what they referred to, with a romantic flourish, as mountain streams, when they had not yet got above the cow-line, so to call it, with all that that implies; in fact, they had not even got above the line of the mountain huts with their lavatories. None of these persons would have dreamt of drinking from a puddle whilst at home, and it is a possibility that a town puddle would have been cleaner.

Similarly the tourist tends to be carried away by the appeal of exotic foodstuffs. It will, in fact, be a strong willed person who can resist tasting the varied shellfish on display along the coast of the Gulf of Naples. There are world famous restaurants at whose doors stands the "Ostricaro", the shell fish seller with a most enticing display. If this is resisted one will still come across epic fish soups which look more like an aquarium than a plate of soup, with whole fish and a variety of molluscs in their shells immersed therein. The fish will certainly have been cooked but I can't help wondering how the shells will have been disinfected, if at all. In some countries the laws governing the sale of shellfish are not enforced at all. Standards are laid down to which the shellfish breeder is encouraged to conform, but there is no legal compulsion and one can imagine the standards which some poor fisherman trying to make a living is likely to adopt.

It is a fact that in Italy, for one, the

incidence of typhoid in the coastal towns is definitely higher than in those of the interior. Santopadre, G., and Dell'Omodarme, G. (1958) report that whilst in Vicenza and in Verona only 1 to 5% of enteric cases were attributable to the consumption of shellfish as many as 75% were so attributable in Leghorn and in Savona, on the Genoa riviera. In assessing the intensity of the danger one goes back to the idea of epidemic constitution. The danger through shellfish depends on the incidence of the illness in the country as a whole. In Britain a fair amount of shellfish is consumed and often in the raw state. As is well known oysters are bred specially under safety rules which, in Britain, are observed. I doubt whether such things as whelks etc., often available for a few pence, at such places as Brighton pier, are reared with any special precautions. Still typhoid and the Salmonellosis as a whole are uncommon in England and Wales, but common in some Mediterranean countries. This matches the fact that whilst there were 235 cases of enteric in England and Wales in 1967, of which 137 were typhoid, in Spain there were 3591, in France 1531, in Italy the surprisingly large number of 10,603 and in Malta 51 cases. (World Health Statistics Report, 1968). In Malta I may mention, shellfish are not reared artificially and they are not popular as food with the minor exception of sea urchins and limpets. In these latter cases one has to bear in mind the breeding ground and its relation to sewage disposal points.

One of the great attractions of a Mediterranean holiday — perhaps the chief one for the majority of holiday makers especially from the North of Europe, — is sea bathing and the safety of this is closely bound up with the disposal of sewage and the faultlessness of the normal sewerage system. Again and again the lesson has been taught to us by experience, such as in the Zermatt typhoid outbreak of 1963, that one should always consider mixed sewage as certainly dangerous and therefore the safe rule is to consider bathing in more or less enclosed harbours as dangerous and best avoided. In every resort the medical officials should know precisely what the situation is and the public should be warned of danger and bathing should be forbidden in dangerous areas. It would be useful if somebody were to undertake the publication of a guide book which would especially point out sewage effluents, their relation to bathing beaches and the sort of treatment to which the sewage is submitted before being discharged. Many seaside towns tend to keep silent about this and the enquirer is liable to get unpleasant surprises.

One other danger is the consumption of uncooked fruit and vegetables. In Britain, presumably owing to the low general incidence of bacterial and parasitological diseases contracted by ingestion, the inhabitants do not generally trouble to cook or to disinfect such things as lettuce or to peel fruit. To do this is strongly advisable in the Mediterranean area. This is again bound up with the possible use of human excreta as fertilisers. Most countries have laws specically forbidding this, but how far are these laws observed? Fairly generally, I would say, in a small place like Malta where through the size of the country the malefactor can be easily discovered and where surveillance is strict. This is not so easy in many other countries, especially those which do not have an adequate sewage disposal system, like some places in Southern Italy. There are other Mediterranean countries parts of which have not yet reached the necessary standard of health. Ben Rachid and Ben Salem (1968) — writing on intestinal helminthiasis in Tunisia report finding parasite ova or cysts in 2,642 samples of faeces out of a total of 6,219 samples from patients in the Tunis region, which meant 15% of positives in samples from the Tunis region and as much as 50% from the mine regions and from the oases. Some of this, as doubtless of other ilnesses, is linked with the use of human excreta as fertilisers which is admittedly done in such areas as Cap Bon and the oases in the South.

The tourist in Tunisia may not find his way to these latter places, but the admission that such customs prevail in one makes one rather wary of eliminating the possibility of their prevailing also elsewhere; and, of course, the vegetable sup-

plies will derive from distant areas. I do not wish to run down Tunisia as a tourist country; it is a very interesting place, a change from the normal environment of most of its visitors and not an unsafe one generally, but it is well that one should know about certain things.

All these considerations have a bearing on two public health measures frequently advised, T.A.B. vaccination before continental travel and completely avoiding the consumption of water whilst abroad substituting it with soft drinks (presumably made with sterilised water) of various kinds or even with wine. With regard to T.A.B. I feel a distinction should be made between tourists and travellers. The tourist wandering around the picture galleries of Florence or idleing on the Côte d'Azur is not exposed to the same risks as the venturesome traveller in Iran or in some remote village in Morocco. Doubtless vaccination with T.A.B. is a counsel of perfection which no hygienist can oppose, but is it really necessary under normal tourism conditions? I believe that vaccination will neither absolve the tourist from the necessity of taking ordinary precautions nor will it protect him against the extraordinary danger, such as a fairly massive sewage pollution of a water supply. Therefore it seems to me that whilst reasonable precautions and not T.A.B. should be taken in most places, specific vaccination should be prescribed to the traveller who is likely to leave the beaten track.

As for the drinking of water from any locality, I think a distinction should also be made between the piped water supply of large and small towns and that available in the more remote villages or in mountain huts. Perhaps it is simpler to ban water in general but I do not think this is necessary when one is dealing with a person of average intelligence to whom matters can easily be explained. Obviously accidents can happen everywhere and the hygienic adviser might prefer to play safe but this does not seem reasonable to me. One could easily end up, being logical, by having the conscientious tourist cleaning his teeth with a mess of tooth paste and appelsaft.

A danger to which the tourist is exposed is the contraction of Brucellosis. To put this in the right perspective one notes that this is a far less serious danger than typhoid or dysentery since the illness itself is not as serious and the possibility of one person starting an epidemic is remote. What would make the Mediterranean countries more risky than Britain itself in this connection is the greater possibility of infection with *Brucella melitensis* deriving from goats and possibly sheep rather than with *Brucella abortus* which occurs in Britain. *Bruc. melitensis* is well known to be more infective and to cause a more serious illness. Now we may as well say in the first place that Brucellosis, which used to be known as Malta fever, is now a very remote danger in Malta itself. In Malta we still get a considerable proportion of our milk supply from goats, but we get a large proportion from cows. Even in goats incidence has now decreased greatly. More important than this is the fact that all milk available for consumption in Malta and Gozo is pasteurised. The possibility of getting Brucellosis from cheese cannot be excluded, but there again there are several considerations. Firstly cheese is generally made from the far less susceptible and affected sheep. Secondly most of the locally made cheese on the market is made from pasteurised milk in any case.

Now while the danger of Brucellosis in Malta has long been recognised and has now been effectively dealt with, this may not be the case elsewhere. Brucellosis is known to be widespread along the Mediterranean coast as elsewhere, so the danger is probably greater in Italy (including Sicily), in Spain and in Greece. The situation with regard to pasteurisation varies but it is almost certainly nowhere as good as it is in Malta, and one can come along surprising reports. Maida (1968) reports that to an incidence of 2.4% of brucellosis in cattle in the Rome region, there were a calculated 45.4 per million human cases. What was certainly unexpected was to find that whilst 121 million litres of pasteurised milk were issued for consumption from the Rome central distributing agency, about 20 million litres went

on the market untreated and 45 million litres were issued untreated for cheese making.

It seems that the truth, regrettable only from the point of view of the hygienist who would occasionally like a flash of drama to light up his everyday work, is that the tourist along the northern coast of the Mediterranean is, on the whole running no great dangers and the illnesses he could contract are not likely to be exotic ones. There was a time when the traveller to Rome ran a serious risk of malarial infection. This is no longer so, neither on the Italian mainland nor in Sardinia, nor in Cyprus. But tourism has been expanding and the traveller who has already been to almost every country in Europe is now invading Morocco and Tunisia. Algiers, perhaps owing to the unstable political situation does not appear much in tourist literature, nor does Tripoli which seems understandably more concerned with developing its lucrative oilfields than its tourist potential. It is not easy to get information on the diseases prevalent in Morocco and Tunisia. There was a time when plague was more or less endemic and so were typhus and relapsing fever. Smallpox was also not infrequent, but it appears that the epidemiological picture has changed vastly for the better. One illness which prevailed widely and I think still survives is trachoma. This is an illness which I personally would dread greatly. My ophthalmologist colleagues assure me that it is not a highly infectious disease. They may be right but judging from the widespread evidence of its sequelae, apparent in the eyes of so many passers-by in the streets, it certainly seems a very common illness and, in the fly season, which I am assured (for my own visits to North Africa were in other times,) is very noticeable indeed when these persistent insects settle on purulent eyes, I confess my faith in an epidemiological assertion would not be strong enough to reassure me and make my stay a pleasant one.

In various parts of North Africa, certainly in Algeria (Rapport sur le Fonctionnement de l'Institut Pasteur d'Algerie en 1966) and in Tunisia rabies still exists. In Algeria in 1966, the latest year for which I have been able to obtain figures, there were 26 human cases. In Tunisia between 1964-67 an average of 206 dogs per year were confirmed, by laboratory examinations, to have been suffering from rabies (Report of the Tunis Pasteur Institute, 1964-67). So this danger must be borne in mind. So also are there scorpions and venomous reptiles, but here again one must keep a sense of proportion. Certainly North Africa affords risks which places like Malta with their complete freedom from poisonous snakes and scorpions do not present, but such snakes do occur in France and other parts of the North African coast.

"The grand purpose of travel," said Dr. Johnson, "is to visit the shores of the Mediterranean." The tourist who follows the great lexicographer's advice will, with a little bit of luck, find that he can do so with no untoward results and a great deal of pleasure.

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