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Travellers' diarrhoea: prospective study by physicians

Travellers' diarrhoea is no respecter of persons. It afflicts tourists, business executives, royalty, and even gastroenterologists—who should know better. Indeed, 49% of physicians and their families attending a world congress of gastroenterology in Mexico City in 1974 were afflicted.[1] Their diarrhoea started on average six days after arrival and lasted five days. One-fifth of the delegates were confined to bed, and 39% had to change their activities.

The gastroenterologists gallantly conducted a prospective study. Specimens of stool in Cary-Blair transport medium and blood for antibody titres were sent before, during, and after the meeting by airmail to a laboratory, and rectal swabs were obtained from those unable to submit a specimen. The attacks were unrelated to age or sex. The incidence was similar at all hotels except for one, where six guests had diarrhoea associated with a particular strain of *Escherichia coli*, which was also linked with eating salads containing raw vegetables. Otherwise diarrhoea was not related to water or iced drinks, and those who took only bottled water did not have a significantly different attack rate from those who drank tap or other water; nor otherwise could eating commercially prepared food, salads of raw vegetables, or unpeeled fruit be blamed.

Mexicans call it turista, the Aztec two-step, or Montezuma's revenge (Montezuma was the last of the Aztec emperors and succumbed to Spanish invaders, who presumably were attacked in turn by travellers' diarrhoea). Elsewhere colourful synonyms include Delhi belly, Rangoon runs, and Tokyo trots. It is worldwide. If contracted in one's own country, change of water or strength of the seaside air is wrongly blamed. When caught abroad it is attributed, often correctly, to bad hygiene. Perhaps because of the rarity in Britain of travellers' diarrhoea, no one has coined terms like Glasgow gripes or Gloucester gallop. Perhaps some of our visitors do suffer but politely do not mention it. Factors that help to spread the disease are poor personal cleanliness (the importance of washing the hands after visiting the WC should be taught in schools everywhere), bad sanitation, and hot weather.

The gastroenterologists' prospective study confirmed that no single organism is responsible, but a probable agent was found in 63% of cases. Enterotoxin-producing *E coli* of different, non-"enteropathogenic" serotypes was the most common, as has been found elsewhere.[2] How conclusive is the case against a strain of a mundane organism like *E coli* to which the host is unaccustomed? Probably as definite as possible. To satisfy Koch's postulates would need further selfless but unsavoury research. Participants would have to ingest organisms isolated from their colleagues and send samples of their effluent for recovery of the same *E coli*. Other possible pathogens included salmonellae, invasive *E coli*, shigellae, *Vibrio parahaemolyticus*, *Giardia lamblia*, and the human reovirus-like agent. The search was negative in 37% of cases, partly because some faecal specimens were not obtained early in the illness, partly because some individuals had taken antibiotics, and some illness was probably not infective.

The drugs most commonly taken by these physicians when ill included opiates and diphenoxylate hydrochloride with atropine (Lomotil). However, assessing therapy in a short self-limiting disorder is fraught with difficulty. Other palliative measures have been suggested. They include special electrolyte solutions with glucose (which the traveller is unlikely to have at hand) and ginger-ale or Coca Cola with table salt.

A drug which will shield the traveller completely is not available. Remedies like clioquinol (Entero-Vioform) are just placebos.[4] Antibiotics should give some protection. So far, controlled trials have given varying results probably because of the different pathogens. Streptotriad has an effect as shown by the study on British Overseas Airways Corporation personnel, for fewer attacks of diarrhoea occurred when one tablet twice daily was taken for two weeks and then one tablet daily for the third week—compared with a neomycin/sulphonamide tablet or placebo.[5] Since then ground staff travelling abroad for up to a month have been offered Streptotriad.[6] Sulphonamides can, however, produce side-effects as unpleasant as the diarrhoea itself and could cause crystal deposition in the kidney in a hot climate with a poor fluid intake, but the risk is remote unless this dose is exceeded.

Some are fortunate and travel throughout the world without heeding what they eat or drink, for they never get diarrhoea. Little is known about protective mechanisms. The changing pH of the stomach and duodenum accounts for the relative sterility of the small intestine, and this is maintained partly by IgA-producing cells in the mucosa and the peristaltic sweeps. Those already living in hot countries have greater immunity.[3] Many travellers ask advice about precautions. The need for these depends on the risk in the country visited, and tourist agents do not include this information in their glossy brochures. Nor indeed are statistics available, as the disease is not notifiable. In Bognor or Blackpool the hazard is small, but in Bombay or Bangladesh the attack rate may reach 100%. Foods which transmit the disorder have seldom been identified, but those who fear Montezuma's revenge

and are staying in a high-risk area should avoid dishes known to transmit the usual forms of food poisoning: raw foods, salads, ice-cream of uncertain origin, ice itself, prepared meat dishes, and meat pies that have been inadequately reheated. Safer foods are those whose handling is minimal or whose germs have been destroyed by adequate cooking—tinned foods or fish or meat well cooked just before serving. If cleanliness of water is suspect bottled drinks or water chlorinated with a suitable tablet can be taken instead. Water from the hot tap should be safe if really hot and so disinfected. Obviously such deprivations are unnecessary in areas where risk is low. Then travellers will abandon themselves to the pleasures of the table, relying only on an aperitif or wine to stimulate a flow of hydrochloric acid sufficient to destroy organisms before they can disturb the tranquillity of their gut—and what a savoury subject for another prospective trial.

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[3] Loewenstein, M S, Balows, A, and Gangarosa, E J, *Lancet*, 1973, **1**, 529.
[4] Kean, B H, and Waters, S R, *The New England Journal of Medicine*, 1959, **261**, 71.
[5] Turner, A C, *British Medical Journal*, 1967, **4**, 653.
[6] Turner, A C, *Lancet*, 1976, **2**, 320.

Feminists and sexual identity

An American psychiatrist,[1] writing recently on "pseudo-homosexuality in feminist students," described how ideological commitment to the cause of feminism had led to increased uncertainty about their sexual identity in a sample of nine women college students. His theme is of wide importance. The days when issues of sexual identity seemed simple, when women patiently tended hearth and infants in their caves or semidetacheds while their men hunted or commuted to the City, are clearly no longer with us. It may seem strange that the affirmation by the women's movement of the value of their own sex should lead to rejection of that central aspect of it concerned with men. But any unthinking male indignation at the phenomenon of feminist lesbianism should be tempered by the recollection of the example of Sparta or the British public school tradition.

We are far from understanding the implications for individual development of these ideological sexual debates, and in any case it would be premature to assume that the traditional stereotypes have been radically dislodged. In general, men are still seen as having more instrumental roles and women more expressive roles in the family and in society—even by students in the late '60s at a progressive university.[2] Stereotypes, however, affect behaviour as well as describing it, and conventional cultural expectations may have influenced research. In social psychology, for example, the methods used for measuring masculinity and femininity have identified masculinity with effectiveness and femininity with passivity. On the basis of such criteria it has been shown that women who are more successful academically[3] and women who coped better with the birth of their first child[4] are less feminine than their sisters who manage these tasks less successfully. Even psychoanalysis, which has contributed so much to our understanding of the infantile roots of sexual identification and of sexual deviancy, has been trapped within the assumptions of a male-dominated culture.

Nevertheless, while the ideological battle waged by the feminists seems justified and necessary, it is sometimes carried out in extreme terms, and the adherents of the movement number some women whose fear and devaluation of men is rooted in their particular personal histories. The arguments between ideologies, however, reflect and in turn influence the pains and conflicts lived out by individual women, some of whom are likely to consult doctors either with late adolescent confusions[1] or with marital conflict and crisis when they are older. How can doctors help? We are dealing with issues where there is no longer a social consensus; not only are old values and perceptions being challenged and new ones developed, but clearly both the values of a culture[5] and an individual's view of himself and his relationships[6] are inevitably contingent, idiosyncratic, and open to change. We no longer have authoritative maps of the social and behavioural world: to some extent each individual must be his own cartographer. The doctor has no claim for specialist authority, and it would be wrong if he was to attempt to impose his own concepts of normality as if these were justified on biological or social grounds. If, however, he can listen carefully, clarify the issues presented by his patients, withhold or honestly declare his own judgments, and withstand his own confusion, he may enable some of these women to resolve some of the inevitable conflicts more rapidly. If he can relinquish his claim to know, lock up his prescription pads, and put on his thinking hat, he may come to deserve a new kind of authority—as a facilitator who can help people to come to terms more constructively with a world that is (whether we like it or not) increasingly complicated and difficult.

[1] Defries, Z, *American Journal of Psychiatry*, 1976, **133, 4**, 400.
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Prognostic factors in childhood leukaemia

Much the most important determinant of prognosis in acute leukaemia of childhood is the cytological type. While children with acute myeloid leukaemia respond better to treatment than adults, the really long survivals—and the prospect of cure—are still almost entirely confined to the lymphoblastic variety. Now that such long survivals are becoming commonplace[1] it is more than ever important to find means of predicting the likely outcome of treatment as accurately as possible in individual cases.

Acute lymphoblastic leukaemia (ALL) is not one entity. Conventionally the leukaemic cells have been regarded as of lymphoid origin, but in about 70-80% of cases of ALL in childhood (null-cell ALL) they lack the characteristics of both T and B cells; T-cell leukaemias comprise about 20-30%; and B-cell leukaemias (in which the cells resemble those of Burkitt's lymphoma) not more than 2% of all cases. These cytological distinctions are clinically relevant, since both T-cell and B-cell leukaemias carry a much poorer prognosis than the