table III it may be calculated that a baby of this weight drinking about one litre of formula would achieve the RDI for both vitamins. Supplementation is, therefore, not essential for the formula-fed baby. It is essential, however, for babies receiving doorstep milk in later infancy, and in view of this the DHSS recommends a small amount of vitamin supplement even for formula-fed babies to establish the habit with the mother. Using the DHSS supplement, which contains (per ml; 35 drops) vitamin A 1500 μg as retinol (5000 IU), vitamin C 150 mg, and vitamin D 50 μg cholecalciferol (2000 IU), the recommended doses for a baby receiving a fortified formula are: 2 drops at 1 month, working up to 4 drops by 2 to 3 months. The cost of these drops is subsidised and they are available free of charge to certain mothers. In the interests of giving the mother consistent advice we endorse the DHSS recommendation that drops be routinely given to *all* children. If, after weaning, doorstep milk is used instead of formula then the full dose of 7 drops (0·2 ml) daily is essential, supplying vitamin A 300 μg, vitamin C 30 mg, and vitamin D 10 μg.

FLUORIDE

The fluoride situation is complex. Even in areas where the amount of fluoride in drinking water is low the baby receiving a powdered formula probably receives more fluoride than a breast-fed one. An American recommendation is to give 0·5 mg of fluoride daily to a formula-fed baby only when he lives in an area where the fluoride content of the water used for reconstitution is below 0·3 ppm (where fluoride is added to drinking water the level is around 1 ppm). We are unaware of a preparation containing 0·5 mg of fluoride which is freely available in Britain.

When considering the dental health of the bottle-feeding baby other dietary factors, apart from fluoride, are important: (*a*) high-phosphate cows' milk resulting in hypocalcaemia should be avoided (see What?); (*b*) formulae requiring sucrose to be added for reconstitution (none of those recommended) may be more cariogenic than others; and (*c*) high concentrations of sweet syrups, such as undiluted fruit drinks in pacifiers, should be avoided since they lead to severe caries of the incisors.

Colleagues in midwifery, nursing, health administration, and the food manufacturing industry gave valued advice during the preparation of this article; the figures were prepared by the department of medical illustration, Birmingham Children's Hospital. We are grateful to all of them and to Mrs P Cox for secretarial help.

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Letter from . . . Chicago

Poikilodokia simplex: a paramarmaladosis

GEORGE DUNEA

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Our faults and failures constitute a more amusing and perhaps instructive topic than our virtues and achievements. Their exposition, however, is best accomplished not "by grave and serious declamation" but in the spirit of the young James Boswell—who in the introduction to his 1762 *London Journal* promised to relate the various stories or conversations that he had heard, and to put down the whims that may seize him, the sallies of his luxuriant imagination, and the various adventures that he may have. One such adventure might well have led him into the crowd of white-coated individuals attending the teaching rounds at the Miniscience University College of Medicine:

"And why didn't you order the magnesium, the chromium, the pseudocholinesterase, the protein bound iodine, and the blood marmalade, Smith?," asks the professor, surrounded by his retinue, as he peers from the end of the bed at an obvious case of poikilodokia simplex.

"I didn't think of it, Sir," answers the cowed houseman.

"Well, don't you think you should have?"

"Yes Sir," says Smith in a strangled and barely audible voice.

There is no cure for poikilodokia simplex. There is indeed not even much that symptomatic treatment can achieve. In fact, no patient with poikilodokia has ever left the professorial unit alive. Yet the above scene, regularly enacted on the wards at Miniscience, will not only give Smith an inferiority complex and hasten his metamorphosis from an idealistic freshman to a cynical young graduate; it will also make sure he will never again forget to order marmalade levels on any suspected case of poikilodokia, whether latent or overt, whether in remission or terminal, since the professor makes it a point of honour to come to every necropsy, and since the above scene may repeat itself in the pathology amphitheatre. Moreover, in view of the professor's interest in the paramarmaladoses, Smith will henceforth regard marmalade determinations as a routine investigation, since one can never tell when poikilodokia may turn up, and since one can never tell when the professor may turn up.

Besides, measuring marmalade levels is harmless. It requires only one additional test-tube of blood, the AutoAnalyzer is set up anyway, and the result could even be useful. It serves as a screening test, as a baseline. It is of interest; you never know what it may show, it may help the patient, it may help someone else in the future. And Smith will leave the teaching hospital convinced of the value of marmalade determinations. On entering private practice, worried about all the poikilodokias he may be missing, he will go to considerable lengths to send specimens to the professor's laboratory and not rest satisfied until serum marmalades are included in the commercially available multichannel automated routine screen. And when he returns to the university to teach the weekly physical diagnosis class, he will make sure to indoctrinate *his* students and pass on all the pearls he has picked up from his old teacher.

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Meanwhile, the load on the laboratory increases: the record now stands at two billion tests per year, the cost is six billion dollars, and the volume is expected to treble by 1980.[1] Much is made of the need to cut costs, yet who stands a chance against such powerful indoctrination? Moreover, the professor, now promoted to associate dean for extramural student affairs, is also chairman of the local Professional Standard Review Organisation (PRSO) committee on diagnostic criteria, and has included marmalade determinations as tests compatible with the diagnosis of essential hypertension, peptic ulcer, coryza, asymptomatic hyperuricaemia, and anxiety neurosis. How then are we to stop doctors from ordering marmalade profiling?

Recent concerns about iatrogenic disease bring to mind the eugenics-conscious carrier of the poikilodokia gene who had a vasectomy at the Minicut Surgical Centre. He developed a slight wound infection, which was treated with gentamicin cream. The systemic absorption of gentamicin caused acute renal failure, this reactivated a peptic ulcer, and after heparinisation for haemodialysis he bled profusely and eventually needed a partial gastrectomy. When the bleeding recurred the surgeons performed a transthoracic vagotomy. By now the patient was desperately ill. Hyperalimentation was begun. Four litres of peculiar-looking fluid was now seen to drain from the chest tube, giving rise to great consternation and to some doubts about the integrity of the thoracic duct and the placing of the hyperalimentation catheter. But the drainage stopped suddenly and inexplicably and the patient recovered—a tribute to the resilience of poikilodokia carriers.

At the fashionable Miniplenty Community Sanitorium, where monitors and telescreens match the overall two-tone colour scheme, a patient with latent poikilodokia complained of dizziness. He promptly had a carotid angiogram. During the procedure he convulsed on the table, became hypotensive, and had renal failure. Nine days later, after the completion of a peritoneal dialysis, a puzzling tender mass appeared in the right hypochondrium, query gall bladder. He was saved by a physician who remembered that not all abdominal masses are visceral, and that even poikilodikia victims may rupture their rectus abdominis—especially if they convulse while strapped to an *x*-ray table.

The patient with poikilodokia catastrophica, however, did not survive the high-powered intensive care unit at the Winston Smith Memorial Medical Centre. He was admitted because of gastrointestinal bleeding. The intern's valiant attempts to measure the central venous pressure by subclavian cannulation resulted, firstly, in bilateral pneumothoraces, then in empyemas, and eventually in the insertion of two chest tubes. He developed septicaemia and aspiration pneumonitis, required bronchoscopy, and had a cardiac arrest during the procedure, but was promptly resuscitated. In addition, earlier attempts to stop the bleeding by infusing pitressin into the coeliac axis had caused an infection at the femoral puncture site, and this now progressed to gangrene, eventually requiring below-knee amputation. Jaundice, seizures, and disseminated intravascular coagulation further complicated the clinical course, and at last a massive haemorrhage put an end to the life of the patient with poikilodokia catastrophica. The question, however, was asked at the time, Could all this have been prevented by early detection and screening?

Screening for asymptomatic disease, indeed, has been the thing to do for several years. Yet no project was even begun under more auspicious circumstances than the pilot study to determine the feasibility of screening for poikilodokia. Involved were the local municipal authorities, the State Planning Board, the Paramarmaladosis Regional Agency, Miniscience University, the Science and Health Museum, the Winston Smith Memorial Medical Centre, and the Poikilodokia Simplex Foundation. A consortium was formed, all rivalries were forgotten, the professor—discoverer of the poikilodokia-paramarmaladosis connection—was appointed chairman of the steering committee, and so promising did the future look that even the normally aloof Miniplenty Community Sanitorium was induced to join in. And, although a lonely voice tactlessly suggested that screening for an incurable disease was somewhat pointless, the enthusiasm of the majority carried the day. They screened a whole suburb for poikilodikia victims, found one child who carried the trait for the disease, and triumphantly concluded that surveys for detecting poikilodokia in the suburbs were feasible.

The success of the pilot study opened a new era in preventive medicine. Every concerned agency now set up its own programme, and soon screening was begun in high schools, factories, shopping centres, and hospital emergency rooms. Before the last local elections the political party in power arranged for an area-wide survey, sent high-visibility vans all over the city, and received widespread coverage from the news media. But as soon as the election returns came in the vans were redeployed and the programme was brought to an abrupt halt. A few months later, after a fight between city and State politicians, funds were withdrawn from the State Planning Board. An even uglier crisis threatened after the Presidential veto, when budget cuts led to the demise of the Paramarmaladosis Regional Agency and of the multimillion federal programme to study the poikilodokia gene and offer genetic counselling. Later in the year militant groups held protest rallies against the screening and called the programme genocidal—since the poikilodokia gene was more prevalent among the Frumentian ethnic group. The screening was stopped; the consortium was dissolved; and it was also about this time that three study groups simultaneously found an association between poikilodokia and treatment with reserpine. The bad news was only partially counterbalanced by a later report that at least reserpine did not cause breast cancer.[2]

It was a warm summer night last year as I read the reserpine-breast cancer paper on my veranda, and all was quiet. Suddenly a loud subterranean noise broke the tranquillity of the scene. I continued to read that "patterns of medical-care system patronage were abstracted," and that "residents are provided with a closed community." The noise persisted. Undismayed, I read on, about savage patients who not only sue their doctors but also eat them ("repeated consumption of medical care"), about pathologists contaminated by cancer cells ("patients with cancer from pathological records"), about strange sacrificial rites ("women in the community prepared in sequence"), about polygamy ("matching the controls with 12 patients"), and about the resurgence of child marriages ("patients who were matched to the patient within six months of date of birth"). At last the noise grew unbearable, and I suddenly realised it was Sir Arthur Quiller-Couch turning in his grave, horrified by the tragedy of a double amputation in "persons at risk of breast cancer on the one hand and of other serious illnesses on the other."[2]

I would have gladly reassured him it was simply "medical obfuscation,"[3] or that the jargon, stalking in our midst "like respectability in Chicago,"[4] merely represented the breakdown of an editorially activated feedback loop. I noted, however, that the journal had come from the learned East, where statisticians now stand poised to disprove the reserpine-poikilodokia connection, and where a Boston scientist has found that the serious illness on the non-cancerous hand is a rare example of poikilodokia in its virulent gangrenosa form. Rumour also has it among the learned that the professor was mistaken in his discovery, and that poikilodokia is not a paramarmalodosis after all but merely the result of a "luxuriant imagination" grown jaded and sceptical with the passing of time, thus proving Lord Conway's admonition that "to have a physician abound in phantasie is a dangerous thing."[5]

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