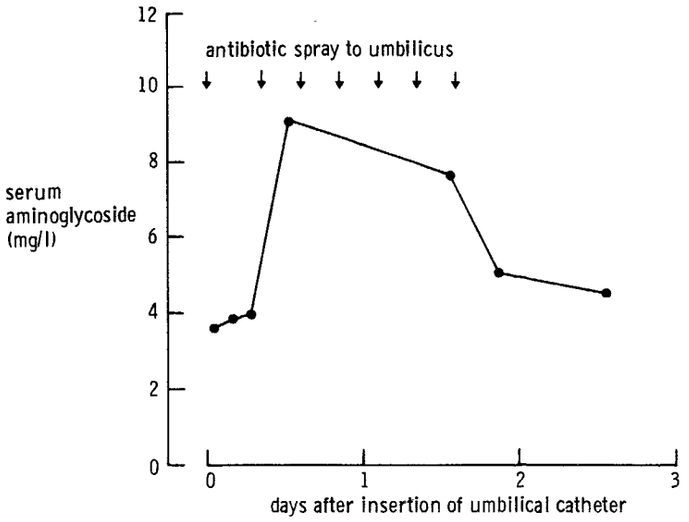

Serum aminoglycoside activity in newborn baby of 29 weeks' gestation whose umbilical stump was treated with a topical antibiotic spray (dispray).

No aminoglycoside was administered systemically during this time.

infant. Damage to the epidermis could have further increased skin permeability, and coincidental systemic gentamicin treatment could have exacerbated the toxic effect of the topical neomycin.

At Nottingham City Hospital, a similar skin spray has been used routinely for some years in infants with indwelling umbilical artery catheters. Arrangements were therefore made to make serial measurements of serum aminoglycoside activity in a baby of 29 weeks' gestation while the umbilical stump was treated with an antibiotic spray for one second on six occasions over the first 36 h of life. Significant aminoglycoside absorption was documented (see figure). Further limited studies of neomycin absorption are in progress. Meanwhile we ask neonatal units to examine their use of antibiotic sprays which contain neomycin (such as 'Polybactrin', 'Dispray', and tribiotic), and to look for any association with deafness. Severe sensory neural deafness in the absence of developmental delay is not uncommon in preterm infants,[4] and has been ascribed to anoxia, intracranial haemorrhage, bilirubin, and gentamicin. Neomycin is, however, the most ototoxic aminoglycoside and it could conceivably be an even more important cause of deafness in very low birthweight babies.

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ATROPINE OR HYOSCINE IN TREATMENT OF ACUTE ORGANOPHOSPHATE POISONING?

SIR,—Dr Stein and Dr Neill (April 6, p 823) report that atropine and hyoscine are equally ineffective in the prevention of death from acute organophosphate poisoning in rats given dimethoate. This statement is cause for concern, since atropine is a standard therapeutic agent in organophosphate poisoning.[1] Stein and Neill refer to work on dimethoate in which I took part.[2] That paper mentioned that repeated atropine injections are effective in the treatment of oral dimethoate poisoning, making reference to an earlier paper[3] for experimental detail.

One reason for the discrepancy may be that Stein and Neill used too low a dose of atropine. Our work,[3] which showed that atropine was effective in treatment of dimethoate poisoning in the rat, was with a dose of 17·4 mg/kg of atropine sulphate every 4 h, whereas Stein and Neill gave only 1 mg/kg hourly. In our work, 17·4 mg/kg was not the highest possible dose, but was selected as an effective one. (There is massive species variation in the handling of atropine.) It would seem that Stein and Neill's conclusion was the result of their choice of dose of atropine and hyoscine.

Stein and Neill also report that dimethoate is a common cause of poisoning in Zimbabwe; it would be valuable if this information were published, with details of cases and of treatment and its efficacy.

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PYRIDOXINE OVERDOSE IN PREMENSTRUAL SYNDROME

SIR,—Professor Gardner and colleagues' report (March 16, p 635) of phocomelia that may have resulted from large doses of pyridoxine taken by the mother during pregnancy should not be dismissed as purely speculative, for they also refer to Shaumberg et al,[1] who reported seven cases of sensory neuropathy resulting from pyridoxine overdose, similar to the neuropathy of thalidomide. There is now further evidence of the effects of such overdosage.

I have been measuring serum vitamin B_6 levels in women taking pyridoxine for premenstrual syndrome. Sensory neuropathy, as evidenced by burning, shooting, tingling pains, paraesthesia of limbs, clumsiness, ataxia, or perioral numbness, was present in 23 of 58 women (40%) with a vitamin B_6 serum level above the normal 3–18 ng/ml. These 58 women had a mean age of 42±9 years, and their presenting symptoms are shown in the table. They were advised to stop vitamins, minerals, and herbal supplements but to continue without alteration any medically prescribed drugs. After 2 months 27 women were reassessed; all reported an improvement, often in glowing terms ($p<0·001$). The improvement was most striking in headaches, tiredness, bloatedness, irritability, and sensory neuropathy, and least in depression. There were no reported withdrawal symptoms when pyridoxine was abruptly discontinued.

The daily requirement for vitamin B_6 is only 2–4 mg, yet patients were taking 50–300 mg daily supplemented by a variety of multivitamin preparations. These reports should cause concern among those who advise pyridoxine therapy for premenstrual syndrome,[2–5] for the possibility of pyridoxine toxicity needs to be recognised. Careful monitoring of pyridoxine is mandatory. If a patient reports benefit from pyridoxine the diet must be

PRESENTING SYMPTOMS AND IMPROVEMENT IN WOMEN WITH RAISED VITAMIN B_6 SERUM LEVELS (>18 ng/ml)

Symptom	Prevalence (%)		
	In whole series (n=58)	On B_6 (n=27)	2 mo after stopping B_6 (n=27)
Depression	79	92	22 ($p<0·02$)
Headache	48	70	11 ($p<0·001$)
Tiredness	59	70	26 ($p<0·003$)
Bloatedness	53	70	26 ($p<0·003$)
Irritability	38	44	7 ($p<0·006$)
Neuropathy	40	37	4 ($p<0·007$)
Puffy eyes	26	26	0 ($p<0·02$)
Symptoms per patient	*3·4*	*4·1*	*1·0* ($p<0·001$)

investigated to ensure that no other vitamin deficiencies coexist. If after one month of pyridoxine there is no benefit or if symptoms get worse or if there are any signs of sensory neuropathy, pyridoxine should be discontinued.

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CROSS-REACTIVITY OF ANTI-KLEBSIELLA K43 BTS 1 SERUM AND LYMPHOCYTES OF PATIENTS WITH ANKYLOSING SPONDYLITIS: ANTIPODEAN CURIOSITY?

SIR,—The suggestion by Dr Struthers (March 30, p 764) that cross-reactivity between anti-*Klebsiella* K43 BTS 1 sera and the lymphocytes of B27-positive English patients with ankylosing spondylitis (AS) is restricted to the Southern hemisphere, requires some qualification. Struthers states that several centres in the UK have failed to reproduce the specific cytotoxic effect of anti-K43 for lymphocytes from AS patients. However, although some centres in the Northern hemisphere using their own reagents have failed to confirm this cross-reactivity, three out of four laboratories have reproduced our observations when supplied with kits (containing cells, antisera, and complement from Sydney) sent from the Southern hemisphere; both UK centres supplied with kits confirmed our data.

Between February and April, 1984, Struthers became familiar with some of the techniques routinely used in our laboratory. He did several cytotoxicity[1] and "modification" assays[2] and was closely supervised during one transformation experiment[3] (involving the transfer of the cross-reactive trait to *Escherichia coli* by plasmid DNA from cross-reactive *Klebsiella* K43 BTS 1). Whether this experience allows him to conclude that these techniques do not "work" in the Northern hemisphere is open to question.

Although many aspects of this cross-reactivity remain to be unravelled, it is fair to say that the specific cytotoxicity of anti-*Klebsiella* K43 BTS 1 serum for AS cells is not an Antipodean peculiarity. Perhaps our observations would gain wider credibility if the earth were flat.

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BUTTON NOSE

SIR,—A woman who had come to this isolated base in Saudi Arabia to join her husband consulted me about her severe maxillary sinusitis. The left side only was affected and she had a chronically recurrent discharge on that side alone. It was not possible to obtain a good view into the nose. A foul mucopurulent flow from the left maxillary antrum filled the left side. Antibiotic treatment and steam inhalations had a good effect and at follow-up 7 days later she was feeling much better. Her left nostril, however, was still obstructed by crusts and a dark slough-like mass.

When I asked her how long she had had these symptoms and about treatments she had had previously she told me that for anyone to look into the nose was new to her. She had usually been simply prescribed drops or tablets. To attempt to clear the crusty matter I gave her a fusidic acid cream to pack the nose. A few days later she returned and felt even better but, though most of the crusts had cleared, there was still a dark mass at the back of the left nares. This time I questioned her more directly about the possibility of a foreign body: had she used, say, a "cotton bud" to clear her nose and lost the cotton wool, or did she clean out her chronically nasty left nostril in any special way? Out of the blue, she told me that when she was a little girl, 32 years earlier, she had pushed a shirt button up her left nostril. However, the doctor had not found it and neither he nor her mother had really believed what she had told them.

A blackened lump of material was removed from the left side of the nose. Forming a core, to a series of laminations, was a calcified disc which may have been the remains of an old shell button. 32 years ago shirt buttons were often made of pearl shell. Since leaving the National Health Service, and with a chance to look back at current trends in medicine in the UK, I have the impression many doctors are forgetting the simple and effective tools we were born with—our hands and eyes.

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Commentary from Westminster

Inquiry into the Outbreak of Legionnaire's Disease

AN independent inquiry is being set up by the Health Minister, Mr Kenneth Clarke, into the outbreak of legionnaire's disease in mid-Staffordshire, in which some 36 people have died and more than 130 have been admitted to hospital. Local health authority members will not take part in the inquiry, which will investigate how the outbreak occurred and how recurrences can best be avoided.

Mr Clarke told MPs that there was already compelling epidemiological evidence that the cooling towers of the air-conditioning system at the Stafford District General Hospital were the source of the outbreak. The hospital's system had been chlorinated and declared safe by the Health and Safety Executive and the Communicable Disease Surveillance Centre at Colindale. There had been delays in diagnosing the disease, first thought to be influenza, Mr Clarke said, because blood tests on living patients did not provide confirmatory evidence until 2–4 weeks after the onset of the illness. Paying tribute to all the staff of the local health authority, Mr Clarke declared that as far as he was aware the hospital had complied with DHSS guidelines on avoiding outbreaks of legionnaire's disease which had been issued after similar events at Kingston-upon-Thames in 1980. As a precaution, however, the DHSS was writing to all health authorities to remind them of the guidelines on inspections, tests, and chlorination. After an exhaustive inquiry it might be necessary to review the design of modern hospitals, since the problem seemed peculiar to buildings with modern air-conditioning systems and showers. There was "tragic irony" in a magnificent new hospital one feature of which has proved to be a cause of disease.

The Labour MP, Mr Jack Ashley, whose own constituency is close to the site of the outbreak, pointed out that apparently 10% of patients entering British hospitals acquire an infection. The Government should take the present