regimen of 8 mg orally 1 h before chemotherapy, then three oral 8 mg doses for 24 h after this. This gives excellent short-term control of nausea and vomiting at a total cost of £48.30. So far we have not seen rebound increases in emesis after cessation of ondansetron, although other antiemetic therapy is continued in an attempt to prevent later symptoms.

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PETER KIRKBRIDE


Sir,—The two papers on ondansetron in alleviating sickness associated with cancer chemotherapy are welcome, despite the cost of the drug (Aug 24 editorial). Dr Smith and colleagues' finding that dexamethasone enhances the action of ondansetron is similar to our finding of enhancement by transcutaneous electrical stimulation of the P6 acupuncture antiemetic point.1 Having demonstrated the efficacy of stimulating P6 to prevent postoperative sickness2 we showed that in patients on chemotherapy acupuncture enhanced the action of older antiemetics3 and that transcutaneous stimulation was more acceptable to patients.4

In a randomised crossover study we have compared ondansetron thrice daily with ondansetron plus two-hourly transcutaneous electrical stimulation (10–15 Hz) of P6. 3 patients who had ondansetron first had no sickness after prophylaxis with the drug alone and this could not be improved upon by transcutaneous electrical stimulation. The other 13 had some sickness after ondansetron and all benefited from the addition of P6 stimulation.1 Furthermore patients often felt that since they did the stimulation themselves they were contributing to their own treatment. A comparison of sickness in comparable groups of patients before and after the introduction of ondansetron suggested that the drug was more effective with the therapy of high emetic potential. Perhaps ondansetron should be reserved for patients at high risk of post-chemotherapy vomiting—eg, women, patients having highly emetic chemotherapy, and those with a history of postoperative or post-radiotherapy sickness.5

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One intravenous injection of ondansetron (during hydration therapy that is needed anyway) 30 min before cisplatin works very well for 24 h,6 and this is probably the ideal regimen (costs apart) for controlling acute emesis in outpatients too since compliance is not compromised by the risk of vomiting.

Your Aug 24 editorial's statement that "ondansetron can reasonably be reserved as a secondline therapy in all but the most emetotropic chemotherapy regimens" may be misleading. Despite the fact that the protection from cisplatin-induced acute emesis achieved by ondansetron plus dexamethasone is very good and clearly better than ondansetron alone, randomised double-blind trials comparing this combination with standard high-dose metoclopramide plus dexamethasone plus diphenhydramine (or lorazepam) have not been published. We need the results of these studies if we are to define precisely the role of ondansetron plus dexamethasone in highly emetotropic chemotherapy regimens.

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FAUSTO ROILA
MAURIZIO TONATO


*Our editorial, in commenting on Jones et al, mistakenly stated that fewer patients had more than five emetic episodes on dexamethasone than with ondansetron (17% vs 36%). For acute emesis the data favour ondansetron (3% vs 17%; p<0.001) and for delayed emesis there was no difference.—Ed. L.

Stability of essential drugs in Sudan

Sir,—Doubts have been raised about the quality of donated drugs in Sudan.1 We present the results of stability tests on drugs that were exposed to extreme climatic conditions in that country.2 In May, 1989, a consignment of essential drugs was shipped from the Netherlands to the Nile Province Essential Drugs Project in Sudan. All were purchased from established generic suppliers in Europe. In July, 1989, the containers arrived in Port Sudan, and were kept in the open in the port area for eight months. Temperatures in the first three months were often above 50°C. In Europe, in July, 1989, the containers arrived in Port Sudan, and were kept in the open in the port area for eight months. Temperatures in the first three months were often above 50°C. In August, 1990, after a second summer in the country, field samples of eleven drugs that were most liable to deterioration were taken from three districts. The potency and level of degradation products were compared with original batch samples kept by the supplier (table). Three products showed a loss of potency. For adrenaline and ergometrine this has serious medical consequences; for retinol it has not, because of the wide therapeutic margin of the drug and the high amount of active ingredient in the product. For all three drugs instability in tropical climates has been reported.4 It is especially reassuring to see that none of the antibiotics showed signs of instability. These are all very commonly used and usually constitute a large proportion of the drug budget.


POTENCY OF ESSENTIAL DRUGS IN SUDAN AND IN ORIGINAL BATCH SAMPLES

<table>
<thead>
<tr>
<th>Potency*</th>
<th>Batch</th>
<th>Field</th>
<th>Difference</th>
<th>Degradation products*</th>
<th>Batch</th>
<th>Field</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetylsalicylic acid tablets</td>
<td>98.0</td>
<td>98.2</td>
<td>+0.2</td>
<td>0.2</td>
<td>0.22</td>
<td>0.12</td>
<td>-0.1</td>
</tr>
<tr>
<td>Ampicillin trihydrate capsules</td>
<td>97.2</td>
<td>94.6</td>
<td>-2.6</td>
<td>2.01</td>
<td>3.75</td>
<td>+1.7</td>
<td></td>
</tr>
<tr>
<td>Amoxicillin trihydrate powder injection</td>
<td>99.7</td>
<td>98.9</td>
<td>-0.8</td>
<td>5.13</td>
<td>6.45</td>
<td>+1.3</td>
<td></td>
</tr>
<tr>
<td>Chloramphenicol palmitate capsules</td>
<td>100.3</td>
<td>98.8</td>
<td>-1.5</td>
<td>2.26</td>
<td>3.71</td>
<td>+1.5</td>
<td></td>
</tr>
<tr>
<td>Benzylpenicillin powder injection</td>
<td>88.6</td>
<td>75.8</td>
<td>-14.4</td>
<td>62</td>
<td>50.6</td>
<td>-11.4</td>
<td></td>
</tr>
<tr>
<td>Ergometrine injection</td>
<td>103.5</td>
<td>103.5</td>
<td>0</td>
<td>&lt;10 ppm</td>
<td>&lt;10 ppm</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Propranolol hydrochloride capsules</td>
<td>101.7</td>
<td>101.2</td>
<td>-0.5</td>
<td>0.58</td>
<td>1.09</td>
<td>+0.5</td>
<td></td>
</tr>
<tr>
<td>Tetracycline hydrochloride capsules</td>
<td>93.0</td>
<td>93.6</td>
<td>+0.6</td>
<td>5.6</td>
<td>5.7</td>
<td>+0.1</td>
<td></td>
</tr>
</tbody>
</table>

*As percentage of stated amount of active ingredient
†As percentage of active ingredient in batch sample
‡Original batch samples kept by supplier
§Batch samples kept by supplier

Thus, with the exception of adrenaline and ergometrine injections, the drug products most commonly used in the Nile exposed. Despite the extreme temperatures to which they were exposed, the Province Essential Drugs Programme did not show signs of instability, which is a new observation. However, during the study period, the WHO Action Programme on Essential Drugs, Amsterdam, Netherlands, M. J. De Goeje and H. V. Hoogerzie, showed that the stability of drugs in these conditions was satisfactory. The study was conducted by the National Quality Control Laboratory, Khartoum, Sudan, and I. O. Abu-Reid.

Loss of mechanical strength in expanded polytetrafluoroethylene vascular prostheses

SIR,—Most vascular surgeons prefer expanded polytetrafluoroethylene (PTFE) grafts for above-knee femoropopliteal bypass procedures. At this site the patency rate is comparable with that for autologous saphenous vein.¹ Since these grafts are rigid, the thin wall type is preferred for ease of handling and anastomosis.

Within two months, our staff had to deal with two cases of suture blow-out and haemorrhage after thrombectomy of occluded thin-wall PTFE grafts implanted 1 and 16 months previously. The grafts were well incorporated without signs of infection. Thrombectomy was done with a balloon catheter passed through a small transverse incision in the graft and the incision was closed with interrupted 5-0 PTFE sutures, carefully tied without tension. Despite these precautions several tears occurred, resulting in indentation of the edges of the grafts. After several attempts the suture was completed: haemostasis was achieved and blood flow was successfully restored.²

Within a week, when still on the surgical ward, both patients had a sudden spouting haemorrhage in the wound and were promptly taken to the operating theatre while external compression was applied. The haemorrhage was due to suture blow-out. In the first case the indented part was resected and a new segment of PTFE was interposed. Anastomoses were done over small 'Dacron' cuffs passed onto the graft to prop up the sutures. Three months later the patient developed a false aneurysm on the proximal anastomosis. The complete graft was removed and replaced by a PTFE prosthesis of normal wall thickness. The patient has been doing well for five months.

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Preparing the procedure for the second case suturing without resection was possible. The patient required another thrombectomy after three weeks. At the end of this procedure the sutures were propped up on dacron cuffs. This patient has been doing well for five months.

In our department some fifty PTFE grafts per year are implanted. These two cases were treated by different surgeons, both familiar with this material. This rare but tricky and possibly life-threatening complication raises the question of the safety of thin-wall expanded PTFE grafts. In our experience, suture blowout has never occurred in regular-wall PTFE grafts or in modern dacron prostheses.

Preventing neural tube defects

SIR,—There was a reduction in the recurrence of neural tube defect (NTD) in two groups in the Medical Research Council (MRC) Vitamin Study (July 20, p 131) —namely, the group that received folic acid 4 mg alone and the one that received a multivitamin preparation plus 4 mg folic acid daily. With folic acid common to both groups, further analysis by the study group, your editorial, and the UK Department of Health has concentrated on folic acid supplementation alone for women with a history of NTD pregnancy and there seems no doubt that the regimen has been effective. There has been some discussion about whether all women should receive such supplements; this has not been advised so far, only some sensible dietary counselling.

Outside the context of NTD prevention, the safety of high-dose folic acid in pregnancy has been questioned before, and Professor Scott and colleagues and Dr Reynolds (Aug 24, p 505 and 506) also question the wisdom of a dose of 4 mg. In fact the MRC study team suggests the more conveniently available 5 mg tablet.

The multivitamin/folic acid preparation used in Smithells' collaborative study contained a daily folic acid dose of 0.36 mg.¹ Low levels of several vitamins and of folate in women delivered of a baby with NTD motivated Smithells et al to choose this preparation.² Although there was a sharp reduction in the recurrence of NTD, the study design was criticised. Nevertheless several clinicians, ourselves included, decided that the administration of such a preparation was worthwhile. Since 1981 Salford Health Authority has provided, free, periconceptional 'Pregnative Forte F' to women with a history of NTD in the family. The clinical genetics unit supplies the preparation and the general practitioner is informed and requested not to prescribe further.