



Kennedy, P G E, and Mitchell, D M (1981) *Iatrogenic hyponatraemia of the newborn due to maternal fluid overload*. *British Medical Journal*, 283 (6297). p. 989. ISSN 0959-535X

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Deposited on: 6 August 2014

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suggested that these drugs oppose the effects of frusemide on renal prostaglandins.^{1 2} If this were the sole mechanism then the tendency of the non-steroidal agents to cause fluid retention might be expected to be related to their potency as prostaglandin synthetase inhibitors.

We have recently completed a study on the fluid-retaining and frusemide-antagonising activity of flurbiprofen. Its prostaglandin-synthetase-inhibiting potency is reported to be 20 times that of indomethacin.³ In a cross-over study on 10 healthy subjects we found that 100 mg flurbiprofen reduced the diuretic effect of 80 mg orally administered frusemide. After they had been pre-dosed with flurbiprofen the cumulative four-hour urinary volume was 10%, sodium excretion 9%, and potassium excretion 12% less than after frusemide alone. By comparison, Brater⁴ found that 100 mg indomethacin reduced the response to 40 mg intravenously administered frusemide by 33%, 29%, and 27% for volume, sodium, and potassium respectively. Although the two studies cannot be considered comparable, they give little support to the theory that an interaction involving renal prostaglandins is the sole mechanism by which non-steroidal anti-inflammatory drugs oppose the action of frusemide. It may be that drugs like indomethacin and frusemide, both weak acids, compete for secretion into the renal tubule, or alternatively indomethacin and frusemide may compete by having opposing actions on the renin-angiotensin system.^{1 2 5 6}

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¹ Patak RV, Mookerjee BK, Bentzel CJ, Hysert PE, Rabej M, Lee JB. *Prostaglandins* 1975;10:649-59.

² Attallah AA. *Prostaglandins* 1979;18:369-75.

³ Crook D, Collins AJ, Bacon PA, Chan R. *Ann Rheum Dis* 1976;35:327-32.

⁴ Brater DG. *J Pharm Exp Therap* 1979;210:386-90.

⁵ Rumpf KW, Frenzel S, Lowitz HD, Scheler F. *Prostaglandins* 1975;10:641-8.

⁶ Attallah A, Stahl R, Bloch D, Lee J. *Clin Res* 1979;27:599A.

SIR,—In response to the paper of Drs A C Yeung Laiwah and R A Mactier (12 September, p 714) I should like to corroborate the evidence of the authors based on work I have recently carried out.

The interaction between non-steroidal anti-inflammatory drugs and frusemide was compared in six young, healthy volunteers and seven geriatric subjects, three of whom were in mild-to-moderate cardiac failure. The effects of indomethacin and naproxen were investigated in single-dose studies in a double-blind, double-dummy randomised trial, urine volumes and sodium outputs being measured for all treatments. Both anti-inflammatory agents caused decreases in frusemide-induced urine and sodium output in both groups of subjects. These were significant at the $p < 0.0025$ level in young volunteers and urine volume was decreased by indomethacin from 1.09 ± 0.065 litres to 0.79 ± 0.065 litres. Naproxen reduced output to 0.58 ± 0.065 litres. In the geriatric group the decrease with indomethacin was significant at the $p < 0.0025$ level and urine output was reduced from 0.49 ± 0.04 litres to 0.29 ± 0.04 litres. Naproxen reduced volume output to 0.34 ± 0.04 litres, which was significant at the $p < 0.01$ level. When young and elderly subjects were compared the only statistically relevant difference was the larger volume reduction in young people with combined

naproxen-frusemide treatment. All the patients in cardiac failure suffered approximately a 50% reduction in urine volume output when naproxen was added to their regimen, which reaffirms the findings of Drs Yeung Laiwah and Mactier indicating a clinically important interaction.

Indomethacin and naproxen did not differ from each other at the level of significance chosen; however, the numerical trend was for naproxen to cause more sodium and water retention than indomethacin. I would echo the sentiments of Drs Yeung Laiwah and Mactier that drugs of this class are best avoided while diuretic therapy for cardiac failure is in progress.

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Iatrogenic hyponatraemia of the newborn due to maternal fluid overload

SIR,—We would like to congratulate Dr W O Tarnow-Mordi and his colleagues on their study (5 September, p 639), in which they demonstrated elegantly the iatrogenic risk of intravenous fluid overload and hyponatraemia which can occur in obstetric patients and their infants. We fully endorse the authors' conclusion that intravenous fluid administration must always be monitored carefully by medical staff.

Although it is now well understood that severe hyponatraemia can develop rapidly in patients who receive excessive intravenous fluid loads, this condition continues to be seen with depressing regularity: it is not confined to obstetric practice and is seen not uncommonly in the postoperative period. We recently found¹ that severe hyponatraemia in a general hospital population was frequently attributable to excessive use of 5% dextrose infusions postoperatively or of diuretics, or both. In either case prompt resolution of hyponatraemia usually occurred once the cause was recognised and removed.

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¹ Kennedy PGE, Mitchell DM, Hoffbrand BI. *Br Med J* 1978;ii:1251-3.

Sleep problems in young children

SIR,—I was interested to read the correspondence on sleep problems in young children (19 September, p 795) and the semi-philosophical debate that Mr A W Fowler's original letter has stimulated (29 August, p 614.)

As a paediatrician I share Priscilla Alderson's views and those of Dr R F Irvine and am surprised that academic psychologists have the confidence to give didactic advice to harassed parents based on conditioning theories rather than studying the long-term effects of different kinds of upbringing on adults, which have yet to be reported on—if anyone is looking at them.

This raises the more fundamental question of whether what could be called professionals

have in the present state of knowledge any right to advise parents on matters of upbringing outside the competence conferred by their training and experience, a matter that was debated at a recent meeting of the paediatric section of the Royal Society of Medicine. It seems to me that parents are more likely to get this right than paediatricians, health visitors, psychologists, etc, and that the best service professionals can do for them is to reinforce their confidence in their own instinctive management.

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SIR,—I write to defend Dr H B Valman's article "Sleep problems" (8 August, p 422). Up to the time I read the article I had had almost two years of broken nights caused by my second son's demanding breast feeds. That same night I put the abrupt method of re-conditioning into force—six weeks later, although I cannot say every night is unbroken, I have had the most continuous sleep for two years. I am greeted each morning with a beaming smile whether or not there has been crying in the night. I cannot believe that this now small amount of occasional crying is going to cause emotional problems later on. My thanks to Dr Valman.

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Child-resistant containers: are we kidding ourselves?

SIR,—In their report (25 July, p 271) Dr A D Greig and his colleagues rightly question whether polystyrene containers which meet the mechanical strength requirements of BS 1679: Part 4 1969 also provide sufficient resistance to unorthodox methods of opening adopted by children.

The test for mechanical strength of BS 1679: Part 4 1969 is essentially the same as a procedure originally developed in this laboratory¹ for the evaluation of tablet and ointment containers. By the application of a force of 35 N at a single point using a simple apparatus we assessed either strength—in rigid (polystyrene) containers—or the extent of distortion—in flexible (polyethylene and polypropylene) containers. Thus we were able to identify the containers which could be expected to provide adequate protection to their contents during use by (adult) patients and those which were too thin, too brittle, or too flexible.

In the recent study by Dr Greig and his colleagues only rectangular shaped tablet bottles were investigated, although cylindrical polystyrene containers with child-resistant closures are also readily available. There are indications that some of these latter containers may offer greater resistance to biting than the rectangular type. In an ad hoc test I carried out, five child-resistant containers of polystyrene (from four different makers) were bitten with maximum force. The four cylindrical containers all developed fine vertical cracks but showed no other signs of breakage and there was no apparent risk of their contents being released. Gross failure with the almost certain loss of contents occurred only in the rectangular tablet bottle, which was of similar design to those illustrated by Dr Greig.

Whereas a wider study is clearly necessary to confirm the relative protection to bite forces afforded by cylindrical and rectangular polystyrene containers, the observations of both ourselves and Dr Greig suggest that the