Characteristics of Women who Suffered Spontaneous Abortion in the Two Groups

	Age (Years)			No. of Previous Births			Social Class (Registrar General's Classification)			Total
	25-29	30-34	≥35	0	1-2	≥3	I and II	III	IV and V	
I.U.C.D. group	20	26	12	0	38	20	18	32	8	58
"Other methods" group	21	17	19	9	26	22	26	22	9	57

as one in which the woman (a) developed a temperature of 37.8°C or more, (b) had some local evidence of infection of the genital tract, and (c) was treated with an antibacterial drug. On this basis four of the women in the I.U.C.D. group (none of whom was using a Dalkon shield) and two in the "other methods" group suffered a septic abortion. None of these six women was seriously ill and the response to treatment was prompt in each case.

The 115 women were followed up for periods ranging from one to 72 months after the abortion occurred (mean periods: I.U.C.D. group, 27 months; "other methods" group, 28 months). One patient in the I.U.C.D. group and one in the "other methods" group developed salpingitis 2 and 11 months respectively after the abortion occurred. Both women were admitted to hospital, and both responded promptly to treatment with ampicillin.

Comment

While the present analysis concerns only 58 spontaneous abortions in women with an I.U.C.D. in situ an appropriate control group was available for comparison. The findings certainly give no cause for alarm. It should be noted however, that only four of the abortions were in women using a Dalkon shield.

¹ Vessey, M. P. *et al.*, *Lancet*, 1974, 1, 495.

² Templeton, J. S., *British Medical Journal*, 1974, 2, 612.

³ Tatum, H. J. *et al.*, *Contraception*, 1975, 11, 465.

⁴ *British Medical Journal*, 1975, 2, 458.

⁵ *International Family Planning Digest*, 1975, 1, 12.

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New non-steroid non-antibiotic skin medicaments

Common skin diseases are now usually treated topically with corticosteroids and antibiotics. But the indiscriminate use of these valuable agents is dangerous. The chief ill effects of corticosteroids are becoming well known,¹ and the casual application of antibiotics is responsible for much allergic skin sensitisation and for selection of antibiotic-resistant organisms in and out of hospital.² Because of these problems, as well as the relatively high cost of most currently available preparations, we have examined cheap, safe alternatives.

Method and results

Traditional formulations such as those containing ichthammol, starch, silver nitrate, potassium permanganate, Eusol, or the antiseptic dyes are messy and often ineffective, but we have obtained promising results with two clean, colourless preparations. The compositions of Miol lotion and cream (Comprehensive Pharmaceuticals Ltd, London) are set out in the table. In most cases the lotion was applied repeatedly as soaks during the first day, and then the more convenient cream was used for at least two weeks. All other local or systemic dermatological medication was stopped during the treatment. In the case of leg ulcers, however, limb elevation and bandaging of supportive hosiery were continued.

After a short initial trial the original formulation of the cream was modified to the composition given in the table. We have subsequently treated 120

patients whose diagnoses were stasis ulcers (44), varicose eczema (36), varicose eczema with superimposed contact eczema (20), severe intertrigo (13), cutaneous angitis (four), and single cases of Darier's disease, widespread capillary haemangioma with ulceration, and benign familial chronic pemphigus. In all cases prolonged conventional treatment with corticosteroids—often with antibiotics—was unsuccessful. In every case the lesions were colonised by pathogenic bacteria or yeasts. *Staphylococcus aureus* predominated in 69 patients, Gram-negative bacilli (mainly *Pseudomonas aeruginosa* and *Proteus* spp) in 40—chiefly in leg ulcers—*Candida albicans* in seven, and *Streptococcus pyogenes* in four patients.

Compositions of Miol lotion and cream

Components	Lotion (pH6.5)	Cream
Sodium chloride	1.98	2.10
Magnesium chloride	1.42	1.50
Calcium chloride	0.17	0.20
Aluminium chlorhydroxyallantoinate ..	1.00	1.00
Camphor	0.08	4.00*
Chlorphenesin	—	0.10
Hydrous cream base	—	49.09
Sterile distilled water	1 to 100%	to 100%

*In initial mixture; owing to volatilisation the product contains 1.5%.

The preparations were well tolerated by all except four patients who complained of local pain in the margins of ulcers. Most patients gained early relief from pre-existing pruritus. In 96 patients substantial clinical improvement was maintained for at least one month. Many of the indolent ulcers healed with surprising speed as did varicose eczemas. Gram-negative bacilli were suppressed in all except three cases of leg ulcer where persistent *Ps aeruginosa* paralleled an inadequate clinical response. *C albicans* and *Str pyogenes* were eliminated during treatment and so was *Staph aureus* generally, but, as we have found using topical antibiotics,³ this organism persisted at lower population levels in 27 patients—including 13 who made satisfactory clinical progress.

Discussion

The importance of suppressing even "subclinical" microbial colonisation of lesions was shown in our earlier work.³ Miol exerts a wide antimicrobial effect both in vitro and in vivo partly due to its salt components. The antibacterial action of magnesium chloride in particular has been noted in our laboratories.⁴ The hypertonic salt content of Miol may also partly account for its anti-inflammatory action. Camphor is included in its natural form as a safe antipruritic, cooling agent⁵; the concentration used in the cream represents 7.5% of the permissible pharmacopoeial dose. None of the components is likely to sensitise the skin or produce systemic complications. Our findings convince us that both preparations merit more detailed investigation. But they are not panaceas and are unlikely to replace topical corticosteroids or antibiotics, which will remain invaluable when used rationally.

¹ Tan, R S-H, *Proceedings of the Royal Society of Medicine*, 1974, 67, 719.

² Smith, R J, Alder, V G, and Warin, R P, *British Medical Journal*, 1975, 3, 199.

³ Selwyn, S, and Chalmers, D, *British Journal of Dermatology*, 1965, 77, 349.

⁴ Shanson, D C, *Journal of Medical Microbiology*, 1975, 8, 357.

⁵ Wilkinson, D S, in *Textbook of Dermatology*, ed A Rook, D S Wilkinson, and F J G Ebling, 2nd ed, p 2071. Oxford, Blackwell, 1972.

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