form. But the recently formed Medical Administrators' Group of the B.M.A. will carry on and extend the principles instituted by the early pioneers and defended so faithfully by a long succession of devoted followers. It is to be hoped that the society's ideals will continue to influence the conduct of medical affairs and will find expression in the wider field of medical management.

[1] *British Medical Journal*, 1967, **4**, 187.

# Paget's Disease of the Skin

It is nearly a century since Sir James Paget first described the eczematoid lesion of the skin that bears his name.[1] This is found most often on the nipple and areola of the breast, but has also been described on the penis,[1] anus,[2] vulva,[3] axilla,[4] and eyelid,[5] and in the mucosa of the oesophagus and larynx.[6]

Histologically there is an infiltration of large, round Paget cells, singly or in groups, throughout the lower part of the epidermis. These have a pale, clear cytoplasm and a large vesicular nucleus, in which there may be a prominent nucleolus. Histochemical stains sometimes show much mucopolysaccharide in the cytoplasm, especially in lesions of the anus[2 7] and vulva, but this is not the rule with mammary Paget's disease.[7] In most cases affecting the breast there is an underlying carcinoma, usually affecting the superficial ducts and contiguous with the skin lesion—though sometimes it is deep-seated and quite separate. Most cases of perianal Paget's disease are also associated with an underlying adenocarcinoma, probably arising from neighbouring apocrine glands.[2] But in Paget's disease of the skin in other sites no underlying malignancy can usually be found.

M. E. Fenn and her colleagues have recently reported seven cases of Paget's disease of the vulva.[8] In all of them the Paget cells, which were rich in mucopolysaccharide, were found in neighbouring pilosebaceous structures as well as in the epidermis, and in two cases the sweat ducts were also involved. In no instance was there an underlying invasive carcinoma, but three patients had a primary cancer elsewhere in the body, either at the time of treatment or previously. One patient had had four primary malignant tumours in addition to Paget's disease over the previous 24 years.

The pathogenesis of Paget's disease has occasioned much controversy. The original view was that it represented an intraepithelial invasion of cancer cells from an underlying carcinoma of a breast duct or an adnexal apocrine gland. Nevertheless, the distance of this tumour from the skin in some cases and its absence in others make this hypothesis frequently unacceptable. There is now a growing consensus of opinion that Paget cells arise in the actual epithelium, and that Paget's disease itself is a type of intraepithelial cancer. In some instances a transition to Bowen's disease (intraepidermal carcinoma) is evident,[9] as in two of the patients described by Fenn and her colleagues.[8] Thus while intraepithelial spread might account for a few of those cases of Paget's disease with an underlying carcinoma, more probably these lesions represent a multifocal primary cancer arising in an extensive field of neoplasia. In all cases of Paget's disease it is important to exclude invasive cancer, not only in the vicinity of the lesion but also elsewhere in the body.

[1] Paget, J., *St. Bartholomew's Hospital Reports*, 1874, **10**, 87.
[2] Gunn, A., and Fox, H., *British Journal of Dermatology*, 1971, **85**, 476.
[3] Koss, L. G., Ladinsky, S., and Brockunier, A., *Obstetrics and Gynecology*, 1968, **31**, 513.
[4] Weiner, H. A., *American Journal of Cancer*, 1937, **31**, 373.
[5] Knauer, W. J., and Whorton, C. M., *Transactions of the American Academy of Ophthalmology and Otolaryngology*, 1963, **67**, 829.
[6] Yates, R. D., and Koss, L. G., *Archives of Pathology*, 1968, **86**, 447.
[7] Lennox, B. and Pearse, A. G. E., *Journal of Obstetrics and Gynaecology of the British Commonwealth*, 1954, **61**, 758.
[8] Fenn, M. E., Morley, G. W., and Abell, M. R., *Obstetrics and Gynecology*, 1971, **38**, 660.
[9] Willis, R. A., in *Pathology of Tumours*, 4th ed., p. 284. London, Butterworths, 1967.

# Contaminated Drip Fluid

Sterilizing bulk supplies is recognized to be an inherently difficult process. Because of the scale of operations only steam sterilization can be used; one container may be adequately sterilized while its neighbour is not; and there is still no certain indicator that the entire contents of an autoclave have been sterilized. To avoid the presence of pyrogens in the final product particular emphasis has been placed on aseptic conditions, and special sterilizing cycles and designs for infusion bottles have also been developed. As a final check the usual practice after the autoclaving process is to test a random sample of the bottles bacteriologically. Nevertheless, clearly the bottles which are used for actual infusions cannot be sampled in this way.

With all these precautions only one previous episode involving fatality from contaminated drip fluid has apparently been reported in Britain in recent years,[1] and doctors have been able to set up a drip confident that the infusion solution is as sterile as that in any drug ampoule. Yet if contamination has escaped detection by routine checks it may unfortunately be revealed only by the occurrence of rigors, severe illness, or even death in the patients receiving the fluid. Thus any inquiry into the recently reported contamination of dextrose solution should ask several questions. Where did the contamination arise—in the distilled water used for preparing the solution, or in the cooling process used after autoclaving? Were these episodes caused by live organisms—and if so why were they so uniformly serious—or by endotoxin? If the solution was initially contaminated by bacteria why were these not killed by autoclaving? Do the tests for sterility and pyrogens suggested in the *British Pharmacopoeia* give adequate protection? Are they carried out at a stage in the process likely to reveal contamination? And, if not, is there a case for sampling after the bottles have been set aside for some time? All these questions must be answered satisfactorily, for, though contamination of intravenous fluid seems very rare, its effects are so disastrous that this episode must not be repeated.

[1] *British Medical Journal*, 1966, **2**, 597.

# Birth Control Campaign

Public opinion seems to be moving in favour of wider provision of contraceptive advice and appliances, and there is increasing pressure to include these services within the