

Yeasts on Skin

Patients with skin diseases have been shown to be considerable sources of micro-organisms in hospital cross-infection,^{1 2} but there has been little previous work on the possibility that they disseminate yeasts.

The healthy skin of young adults does not normally harbour *Candida albicans*, but hospital patients may carry this yeast. Dorothy Somerville³ has made a study of the carriage of yeasts among 286 male patients in two wards in a skin hospital. One ward consisted of 12 single rooms, and the other was an open ward with 16 beds. Patients in the two wards, if not confined to bed, shared a single day room and therefore mixed freely. Swabs were taken from gums, nose, chest, and groin and suitably cultured so that yeasts could be identified. *Candida albicans* was the organism identified most often. On admission 27% of patients carried this organism on the gums but few carried it at other sites. Patients with eczema were carriers rather more often than patients with psoriasis or other skin conditions. During their stay in hospital more than 1 in 3 of all patients acquired *Candida albicans* at some site not colonized on admission, and 52% carried the yeast at some time during their hospital stay—45% on the gums, 12% on the chest, and 20% on the groins. Carriage on the gums and on the skin was found rather more often in patients who were treated by antibiotics than in those who were not. The effects of steroid treatment could not be assessed, as over 75% of patients received it, mainly in topical applications.

A number of other yeasts were identified, the most interesting being *Pityrosporum pachydermatis*, an organism previously reported only from animals but found in no fewer than 47 of these patients (16%). Colonization by this organism was more frequent in the single-bedded rooms than in the open ward. Two patients were admitted already colonized. Both had pustular psoriasis, and since both had many previous admissions to the hospital they had presumably acquired the yeast from some common source. At present there is no way of subgrouping yeast species for epidemiological work, and the source may be endogenous or exogenous. It is impossible, therefore, to decide for certain how yeasts spread. But several patients concerned in the spread of *Pityrosporum pachydermatis* were also concerned in the spread of other organisms such as *Streptococcus pyogenes*, *Pseudomonas aeruginosa*, and antibiotic-resistant *Staphylococcus aureus*, as reported by W. C. Noble.⁴ This would suggest that certain patients with severe skin disease become easily colonized by any organism in the environment and act as a source of infection for other patients. The more severely affected patients would have been admitted to single rooms and thus account for the greater incidence of infections there than in the open ward.

Infection with yeasts is becoming more common. This is especially true of vaginal infections. These are attributed by some to the use of antiovaratory contraceptive pills,⁵ but others have doubted this explanation.⁶ It is not always easy to distinguish between simple carriage and active infection, but the formation of pseudomycelium may be helpful. When yeasts penetrate more deeply, as seen, for example, in burns units and renal transplant units, they certainly take on a pathological role. In the past the gums and the intestinal tract have been investigated as sources of infective yeast, but

from Somerville's observations it is apparent that the skin, especially if diseased, must also be considered as a possible source.

¹ Hare, R., and Cooke, E. M., *British Medical Journal*, 1961, 2, 333.

² Selwyn, S., and Chalmers, D., *British Journal of Dermatology*, 1965, 77, 349.

³ Somerville, D. A., *Journal of Hygiene*, 1972, 70, 667.

⁴ Noble, W. C., *British Journal of Dermatology*, 1971, 85, 24.

⁵ Catterall, R. D., *British Journal of Venereal Diseases*, 1971, 47, 45.

⁶ Davis, B. A., *Obstetrics and Gynaecology* (New York), 1969, 34, 40.

Smallpox Unawares

Smallpox ceased to be endemic in Great Britain in 1935, and all outbreaks in this country from then until now have followed the introduction of the disease by a person who contracted it abroad. Last week's outbreak in London is remarkable, and perhaps unique for this disease, in that it started from an accidental infection in a laboratory.

The initial patient was a woman aged 23 who is a technician at the London School of Hygiene and Tropical Medicine, and she acquired the infection from a laboratory there, where the virus was the subject of experimental work. On falling ill she was admitted to the Harrow Road branch of St. Mary's Hospital, London, on 16 March, and the disease was diagnosed on 23 March. Meanwhile two visitors to the ward in which she lay contracted the disease and one of them has died of it. Further details at page 126.

This outbreak will provide the first test of the public health measures taken to control spread of the disease since routine vaccination in childhood was abandoned as Government policy in 1971.¹ Compulsory vaccination ended in 1948, and the law then acknowledged rather than changed the actual state of affairs. Thereafter the proportion of infants vaccinated continued to decline, and of those who did receive it only a small proportion were vaccinated some seven years later, so that the effect had greatly waned by the time they were grown up. The arguments for and against routine childhood vaccination were set out at length in 1971 by Professor G. Dick,² who inclined towards its abolition, and they met with both support and disavowal in our correspondence columns. But the Health Departments had sufficient confidence in present-day measures for the control of epidemics to accept that routine infant vaccination had little relevance to them any longer in this country.

What remains of the utmost importance is that medical and laboratory and ancillary staff should at all times be fully protected against the disease. In the present outbreak the technician is reported to have been vaccinated last year. It must therefore be a matter for concern that she nevertheless contracted the disease in a laboratory where this exceptionally dangerous virus was being handled. Furthermore, the history of smallpox outbreaks in this country shows that the early cases are often not recognized for what they are until they have had plenty of time to spread the infection. Consequently the question all senior staff in hospitals and laboratories should examine at intervals is whether every member of the staff is properly protected against the disease. For anyone, whether surgeon or laundryman, physician or porter, may come into contact with a case unawares.

¹ *British Medical Journal*, 1971, 3, 323.

² Dick, G., *British Medical Journal*, 1971, 3, 163.