ADDENDUM.—Since the preparation of this paper we have included in our battery of chemotherapeutic agents "epodyl" (I.C.I.) and vincalcukoblastine, on the advice of Mr. L. Walsh, of Atkinson Morley's Hospital, and Mr. K. Till, at Great Ormond Street, respectively. In the five gliomata tested (four astrocytomata and one ependymoma) vincalcukoblastine has proved very cytotoxic but occasionally variable in its effect in cells *in vitro*; this is in accordance with the behaviour of the drug *in vivo* (Dr. G. Hamilton Fairley, personal communication). In contrast, epodyl has proved more cytotoxic in most cases than mannitol busulphan and has often an even higher chemotherapeutic index.

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Medical Memoranda

Erythema Nodosum in Association with Pustular Ringworm

Erythema nodosum is generally regarded as part of a clinical syndrome, the cause of which undoubtedly varies with the climate, geographic location, and the prevalence of any one predisposing disease.

In this country, where Willan, in 1808, was the first to describe the condition of erythema nodosum, tuberculosis was thought to be the prevalent predisposing disease. This was so at the turn of this century, but it was later noted by Forman (1936) and many others that streptococcal infection was by far the most frequent cause of this condition. It was not until 1941 that King, in the U.S.A., made the observation that 111 of 141 patients with erythema nodosum showed hilar-gland enlargement on x-ray examination of the chest. This observation was confirmed by van Beek and Haex (1943), Löfgren (1946), and others, and shown to be part of a generalized sarcoidosis.

In a study of 70 cases of erythema nodosum in England, Vesey and Wilkinson (1959) showed 45.6% to be of proved or presumptive streptococcal origin, 5.6% were tuberculous, 35.7% accompanied sarcoidosis, and 13% were of mixed or unknown origin, of which none were fungal.

The present view is that erythema nodosum occurs most often as a sequel to haemolytic streptococcus infection of the upper respiratory tract, less frequently in tuberculosis, sarcoidosis, and leprosy, and rarely in syphilis, lymphogranuloma inguinale, coccidiomycosis,

and blastomycosis. In the endemic areas of the southern states of the U.S.A. primary infection of incomers by coccidiomycosis is often asymptomatic or manifest only by what would pass for influenza (Dickson, 1937), such manifestations often being accompanied by erythema nodosum, from which most patients make an uncomplicated recovery (Dickson, 1938a, 1938b). Smith *et al.* (1946), in a review of 1,351 cases of coccidiomycosis, found 4.6% to have erythema nodosum. In an epidemic of North American blastomycosis involving 10 patients, Smith *et al.* (1955) found three cases of erythema nodosum, an association not previously described. In these deep fungal infections erythema nodosum does occur, but is rarely found in association with the superficial dermatomycoses. With the decline in the incidence of the superficial mycoses, the present case of a young boy with such a syndrome is recorded.

CASE REPORT

The patient was a boy aged 7 years 7 months. Some two weeks prior to examination he had developed "red itchy patches" on the forehead and thigh, which increased in size and became rough and scaly. These were soon followed by a "huge red lump" on the back of his head. He kept a white mouse, which he allowed to run over his head. (The animal was disposed of following the clinical diagnosis, and comparative mycological study was not obtained.)

On examination an inflamed boggy swelling of pustular ringworm exuding seropus, 4 cm. in diameter, was seen over the occipito-parietal area of the scalp. On the forehead and thigh were two discrete circinate areas of scaly ringworm. There was a bilateral cervical adenitis. A faint, diffuse pale erythema was noted over the lower limbs. The temperature was 101° F. (38.3° C.).

He was admitted to hospital for investigation and treatment. The day after the initial examination he was found to have developed a marked erythema nodosum over both shins.

Investigations.—Mycological culture revealed *Trichophyton mentagrophytes*. Haemoglobin was 12.3 g./100 ml.; P.C.V. 39%; M.C.H.C. 31.5%; E.S.R. 48 mm. after 1st hour (Westergren). Direct swab from pustular ringworm showed a heavy growth of *Staphylococcus albus* (coagulase-negative). Throat swab showed no haemolytic streptococci. X-ray examination of the chest revealed no abnormality. Mantoux intracutaneous test (1 in 10,000) was negative.

Clinical Progress.—On treatment with systemic griseofulvin and topical measures the ringworm lesions steadily healed, with an associated regression of the erythema nodosum and fall in the E.S.R. Recovery was uneventful.

COMMENT

Mycological investigation of similar uncomplicated cases have revealed that a large proportion of mice sold in the West of Scotland as pets or as laboratory animals are infected with *Tr. mentagrophytes*.

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