previous papers refer to hyperkeratosis and parakeratosis rather than dried serum. The lesions in this case appeared to be friable hyperkeratoses to the naked eye.

The clinical picture is undoubtedly due to the unusually large population of acarids, which must have been several thousands in this patient, compared with the average of 11.3 found by Mellanby. There are two possible explanations for this.

1. The acarid differs in some ways from the usual one. Toomey (1922) was of the opinion that the disease was caused by *Sarcoptes elephantiacus* and was of animal origin. Examination in this case showed an acarid anatomically identical with *Sarcoptes scabiei hominis*, but, as Mellanby says, many animal acarids appear to be identical but have different habits. Calnan's cases seem to have been introduced into a ward by a boy with crusted scabies, and, although three other cases occurred, the rest of the inmates developed the ordinary infection. At the same time it must be admitted that the occurrence of four cases of this rare condition in one institution was unusual. Might it be that *Sarcoptes scabiei hominis* does on occasion develop new habits and that a crossed infection is therefore more likely to be shown clinically in this unusual form?

2. The patient himself is unusual in his response. (a) Owing to poor personal hygiene, mental deficiency, etc., the acarids continue to reproduce unhindered. This does not appear to be the case here. (b) The usual method of removing the acarids by scratching is at fault owing to sensory loss or an unusually poor response to their presence. Mellanby has shown that it takes four or more weeks after burrows become visible for the itching to begin, and he is of the opinion that this is due to sensitization of the body to the acarids. It would seem possible that the cause of this unusual picture might be that the patient failed to become sensitized, failed to remove the acarids by scratching, and therefore developed a population so great that the usual burrows were replaced by veritable warrens.

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Fixed Eruption due to Sulphonamide Hypersensitivity

"Fixed drug eruption" is a rare but interesting sensitization reaction characterized by rapid development of one or more circumscribed erythematous plaques over the body (skin and mucous membrane) following systemic administration of certain drugs. The eruptions disappear completely, often leaving some residual pigmentation, and recur on the identical sites if the offending drug is administered again—that is, the sites are fixed for the eruptions to recur, and hence the term "fixed eruption." Phenazone, phenacetin, amidopyrine, barbiturates, quinine, sulphonamides, arspenamines, and phenolphthalein are apt to produce fixed eruptions, though, of course, on very rare occasions. A case of fixed eruption has recently been reported following the use of tetraethylthiuram disulphide ("antabuse") in the treatment of chronic alcoholism. As sulphonamides are often used, either alone or in combination with some antibiotics, and in view of the rarity with which fixed eruptions occur after their use, the following case is of interest.

CASE REPORT

The patient, a male student aged 20, had a gluteal abscess close to the anus and some associated lung trouble (acute

bronchitis) in July, 1950. Apart from the usual local treatment for abscess, he was advised to take sulphathiazole, 1 g. ("cibazol," two tablets) four times daily. Within three to four hours after the first dose, which he took in the evening, he experienced some itching sensation in his lips as well as over some localized areas in the abdomen and medial border of the right foot. Next morning he noticed some swelling of the lips and surrounding the anus and external urethral meatus, along with three erythematous plaques—one of about 1½ in. (3 cm.) in diameter over the left hypochondrium and two over the medial border of the right foot; one of the latter was about 1 in. (2.5 cm.) and the other about ½ in. (0.6 cm.) in diameter. There was much itching over these areas. The drug was stopped immediately and the patient given antazoline ("antistine"), two tablets thrice daily for the first day and then one tablet thrice daily for the next two days. All the symptoms subsided in about five days, leaving a dark spot of about 1 in. (2.5 cm.) in diameter in the left hypochondrium, and a less dark spot of about ½ in. (1.3 cm.) in diameter and a red spot of about ½ in. (0.6 cm.) in diameter—that is, original erythema—both in the medial border of the right foot.

In the third week of September he took two tablets of sulphadiazine (1 g.) for the same lung trouble. About half an hour later he experienced itching of the lips and also of the residual spots in the abdomen and right foot. Subsequently his lips swelled up and erythema of identical nature and in identical areas occurred as previously. The drug was stopped immediately and the symptoms subsided in about two days, leaving only the same residual spots.

On August 25, 1951, he had an attack of acute bronchitis, for which he was given "sulphatriad," 1 g. thrice daily. About 20 minutes later he experienced an itching sensation in his lips and around the anal and urethral orifices, which swelled up rapidly. Erythema of similar nature and in the same spots over the abdomen and right foot again occurred. The drug was withheld and all symptoms subsided in about three days, leaving the residual spots once again in their previous sites. Recourse was had to penicillin, which was given intramuscularly without any further reactions.

COMMENT

Sulphonamide hypersensitivity is not very uncommon, the usual hypersensitivity reactions being drug fever and drug eruptions of urticarial and maculo-papular types; but a strictly localized sensitivity reaction of the nature of fixed drug eruption is rare. The characteristic feature of the above case is recurrence of cutaneous manifestations of identical nature and in identical sites following each dose of sulphonamide. Another feature is that whatever sulphonamide compounds were used the same reactions were reproduced every time—that is, hypersensitiveness was developed against all sulphonamide compounds. In this connexion Lehr's (1950) observation is of practical value. He observed that the higher the concentration of any individual sulphonamide in the body the greater was the chance of developing hypersensitivity. He showed that sensitization was most unlikely to occur with dosage of less than 2 g. of any individual sulphonamide daily (with blood levels of less than 5 mg. per 100 ml.). A combination of different sulphonamides (like sulphadiazine, sulphathiazole, and sulphamerazine) produces its optimum effect without giving rise to a high enough concentration of any of the individual compounds to develop hypersensitivity. The administration of sulphonamides would have been possible in my case if a combination such as sulphatriad had been used at the very outset. However, a number of effective antibiotics are now available to combat bacterial invasions safely.

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