Section of Dermatology

President—W. N. GOLDSMITH, M.D., F.R.C.P.

[*February* 16, 1950]

Prurigo Nodularis.—W. P. ELFORD, M.D., and F. PARKES WEBER, M.D.

E.U., married man of 64, a butcher, developed an eruption of small itchy papules on the legs in 1940, and subsequently on the arms and scrotum. The lesions gradually increased in size until some were the size of small grapes. More recently the lumbo-sacral region and the backs of the thighs have been affected. The lesions are sharply outlined, raised, and apparently confluent in places. The surface has a peculiar cerebriform appearance, pale-pink in colour, with a slight violaceous tint, the surrounding skin being brownish. There is no ulceration, but itching is said to be intense, and scratching causes some bleeding. The patient attributes the increase in size and the development of new lesions to scratching. None of the lesions has ever disappeared, but many new ones have gradually developed. There is no constitutional disturbance. There is a firm non-tender gland, the size of a bean, in the left inguinal region, and the right epitrochlear gland is palpable. Factitious urticaria could not be demonstrated.

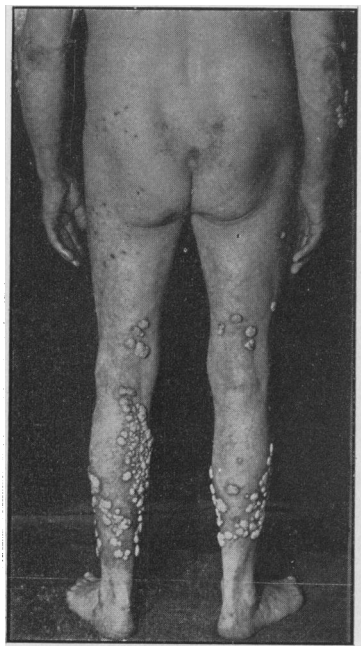

FIG. 1.

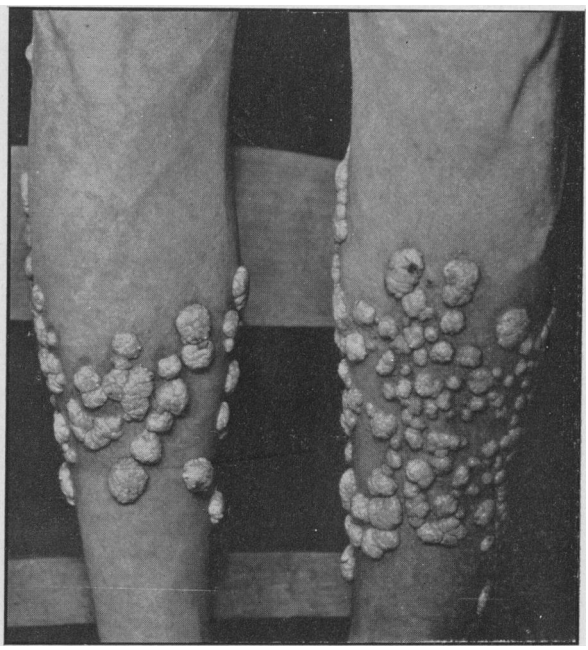

FIG. 2.

FIGS. 1 and 2.—Lesions on the lower extremities.

Past history.—No illnesses. Said to have had fits as a child.

Personal history.—Married, 3 sons, aged between 32 and 39. Youngest has had fits of an epileptiform nature since the age of 2 or 3 years.

No idiosyncrasy to food. Said to have drunk considerably at one time.

Family history.—3 brothers and 2 sisters. Family split up early and lost trace of. No known history of complaints of an allergic nature in the family.

Investigations.—W.R. and Kahn reactions negative. E.S.R. (1946): 28 mm. in one hour. (1950–Jan.): 1 hour—20 mm. 2 hours—30 mm.

Mantoux reaction: 1:10,000, negative. B.P.: 155/85.

Urine: Albumin nil. Sugar nil.

Glucose tolerance test normal.

Smears: Few polymorphs. Many Gram-positive cocci, few Gram-negative bacilli and Gram-positive bacilli. Occasional thin filament. No yeast-like spores seen.

Culture: Contaminating mould. Gram-negative bacilli and Gram-positive cocci. No yeast-like spores grown.

Guinea-pig inoculation negative.

Blood-count (1946): R.B.C. 5,000,000; Hb 100%; W.B.C. 8,000. Polys. 74%, lymphos. 18%, monocytes 3%, eosinophils 5%. (1950): R.B.C. 4,700,000; Hb 95%; W.B.C. 10,000. Polys. 73%, lymphos. 21%, large monos. 4%, eosinophils 2%.

Histology (Dr. Muende).—"The epidermis shows marked warty hyperplasia. The corium contains a dense cellular infiltration with lymphocytes, few eosinophils and numerous reticulum cells."

Section stained for amyloid was negative.

Treatment.—Local applications have proved unhelpful. Oral iodides gave no relief. Superficial X-ray therapy to one leg had no apparent effect on the condition. (Dose: 150 r filtered through 3 mm. aluminium at weekly intervals for four doses.)

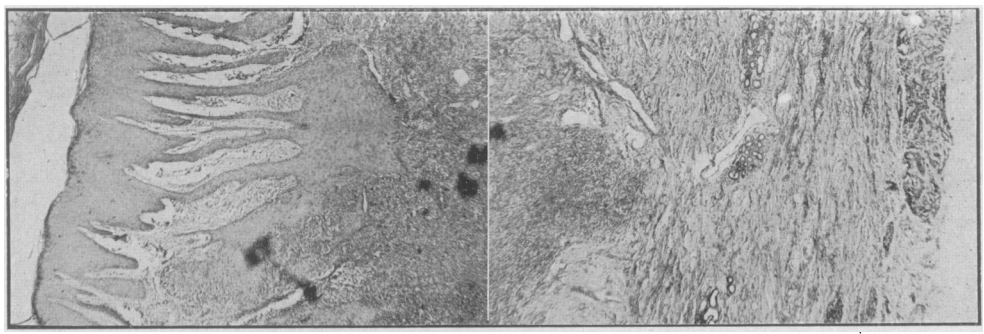

FIG. 3 (Section II).—Prurigo nodularis. High power. To show acanthotic *papillomatous* growth and nodule of granulation tissue protruding downwards and infiltrating subcutaneous fat tissue.

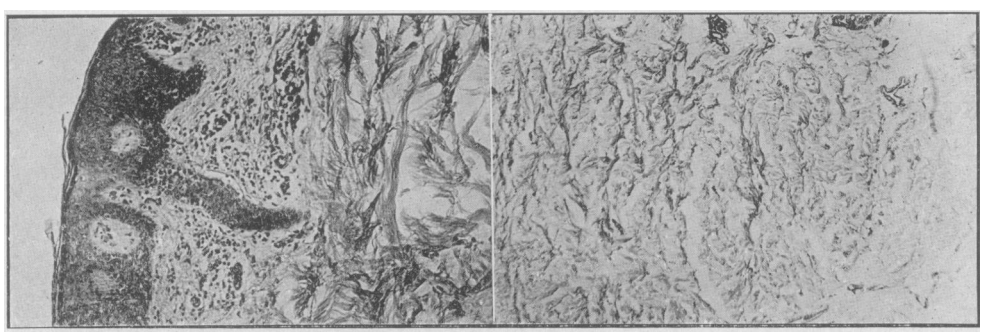

FIG. 4 (Section III).—Prurigo nodularis. High power. Showing the early changes in the pre-nodular phase. Marked acanthosis with no intra-epidermal œdema. Cellular infiltration around vessels with narrowed lumen and limited to the subpapillary layer.

Dr. F. Parkes Weber: I am very pleased to be associated with Dr. Elford in his search after truth; that is really what this Society is meant for. When one is seeking the truth in a puzzling dermatological case one cannot do better than bring it before this Section. Neither the doctor nor the patient can lose anything, they may gain a great deal. The present case might be an exaggerated form of prurigo nodularis, but no one seems ever to have seen an undoubted case of prurigo nodularis which looks exactly like it. That does not rule out the diagnosis completely; it might be a very rare exaggerated form. The lesions are associated in some way with the localized itching and scratching. When I spoke recently to Sir Aldo Castellani and showed him the notes he agreed that it was a case of prurigo nodularis, but when I showed him the photographs he said that though he had seen a good deal of prurigo nodularis, he had never seen a case quite like this one, which superficially reminded him of cases of chromoblastomycosis, a very unlikely disease to occur in England.

Anyhow, the nodular lesions as illustrated by the first section, are a kind of very chronic subepidermic non-suppurative granulomata, covered by wart-like thickened epidermis with (in parts) a cerebriform naked-eye appearance. Suggestions of counter-infection have been made, for instance, with wart virus.

Dr. R. T. Brain: I find it difficult to accept the diagnosis of prurigo nodularis because of the extraordinary warty appearance of the moist lesions in the groin. As a butcher he might have picked up a wart virus from one of the animals. I think one should look for inclusion bodies and it would be interesting to take a piece of the tumour and to grind it up with sterile saline and inoculate the skin with a filtrate and see if one could produce a lesion.

ADDENDUM

We are indebted to Dr. M. Lowenberg for the following histological report:

Section I.—A sessile growth on the skin; in the centre an enormous hyperkeratosis with parakeratosis, Malpighian layer very acanthotic with big cells, many binucleated ; rete pegs irregularly misshapen. A broad band of granulation tissue surrounds the acanthotic cell masses and has in places invaded them; no abscess formation present. Small tracks of the otherwise sharply limited cellular infiltration accompany vessels and sweat glands downwards. Close to the base an implantation cyst filled with lamellated horny masses and two small bits of implanted epidermis are present. [Not illustrated.]

Section II (Fig. 3).—Growth situated on a broad base. Hyperkeratosis very much less than in Section I. No parakeratosis. Epidermis raised up in a papillomatous manner with well-shaped elongated columnar rete pegs. Malpighian layer otherwise as in Section I, also a surrounding dense granulation tissue, here containing numerous eosinophils; the same invasion of the Malpighian layer without any abscess formation. The cellular infiltration protrudes much deeper, infiltrating the fat cushion of the sweat glands and the subcutaneous fat tissue.

Section III (Fig. 4).—Early Stage: Slight increase of horny layer, no parakeratosis, considerable acanthosis, no intra-epidermal œdema; amitotic dividing cells present. Collagenous tissue slightly œdematous, in one larger area sclerotic. In the upper third of the dermis a cellular infiltration of varying density mainly around the vessels, consisting of round cells, connective tissue cells, histocytes; numerous scattered mast cells, no eosinophils. Vessels mainly with narrowed lumens and endothelial swellings. No cellular infiltration in the deeper parts of dermis or in subdermis. The sweat gland coils are untwisted, their cells vacuolated, and the nuclei do not stain well. In the sub-epidermal layer only a few sweat gland ducts, not one porus sudiferus, could be found. Sebaceous glands and hairs have also disappeared.

Discussion.—The histological picture does not contradict the clinical diagnosis—Prurigo nodularis: a diagnostic histological picture for this disease does not exist. The histological findings are indefinite and multiform (Besselmann, 1932, *Arch. Derm. Syph., Berlin*, **166**, 212). This is apparent in the present case, which presents three different lesions.

The striking feature, the considerable granulation tissue, is described in the literature only in one case (Besselmann 1932), and in that case an abscess formation in the epidermis was present; rightly the author states that both conditions are neither diagnostic nor essential for the disease, prurigo nodularis. We have not seen any abscess formation but the presence of the implantation cyst shows clearly the considerable injury to the skin and the easy possibility of an infection. Examples of injured epidermis healing quickly and with considerable hyperplasia are well known in other skin diseases. The inflammatory cellular infiltration in the deeper and deepest layers is of no more diagnostic significance than the changes in the epidermis and the granulation tissue; they are secondary: in the early lesion they are missing. Even the changes in the early lesion are not characteristic; in every normal skin which is exposed to continual scratching they could be found. Whether these excessive tumour-like nodules occur without the presence of such considerable granulation tissue could not be answered from the literature, but it is striking that in Besselmann's case the nodules seem to have been as big as in the present case. The assumption of Netherton (1923, *Arch. Derm. Syph. Chicago*, **8**, 193) that the primary cause of prurigo nodularis lies in a disturbance of the sweat glands is doubtful; similar changes as described by Netherton are visible in the present case and are easily explained by the condition of the skin appendages in the upper part of the dermis.

Prurigo nodularis is mainly confused with urticaria papulosa perstans or with neurodermatitis chronica (Prurigo diathésique à grosses papules). The characteristics of both conditions are certainly not present in this case.

The assumption of an individual predisposition of the skin to react towards intensive scratching with the formation of gross papules and nodules of different histological patterns would be an explanation of the rare occurrence of prurigo nodularis.

POSTSCRIPT (October 1950).—It may be mentioned that owing to the presence (special staining methods) of peculiar lesions of the nervous elements, R. M. Perez and C. A. Maruri (*Ann. Derm. Syph., Paris*, 1949, **9**, 623) use the term "Chronic Allergic Nodular Cutaneous Polyneuritis" in preference to "Prurigo Nodularis" and the numerous other synonyms of the disease.

The following cases were also shown:

Xanthomatosis.—Dr. E. A. FAIRBURN for Dr. F. RAY BETTLEY.

Four Cases of Epithelioma Adenoides Cysticum (with photomicrographs and family trees).—Dr. C. H. WHITTLE, Dr. A. LYELL and Dr. R. E. CHURCH.

Systemic Sarcoidosis.—Dr. S. C. GOLD.

Mycosis Fungoides.—Dr. R. SCUTT.

Nævus Syringadenomatosus Papilliferum.—Dr. R. H. MEARA for Dr. G. C. WELLS.

(These cases may be published later in the *British Journal of Dermatology*.)

[*March* 16, 1950]

Spontaneous Resolution of a Molluscum Sebaceum.—L. MUSSO, M.R.C.P., for HUGH GORDON, M.C., F.R.C.P.

This patient, a woman aged 52, first noticed, eleven weeks ago, a pinhead-sized, non-painful red pimple on the right side of the neck which gradually enlarged and after five weeks became an umbilicated mass with a keratotic centre and a white, smooth, rolled edge. About six weeks ago the lower inferior third of the lesion was excised for biopsy, but the remainder of the mass continued to grow for one more week. Then it began to regress and shrank during the next three weeks to a small mass about 0·3 cm. in diameter which fell off two weeks ago. There is no history of injury and no treatment was given.

When examined on February 3 the appearance was that of a umbilicated mass with a keratotic centre and a white smooth rolled edge measuring 1·1 cm. × 0·9 cm. × 0·4 cm. high, on the right side of the neck (*see* Fig. 1). On examination on March 14, there was a red oval area measuring 2 cm. × 0·8 cm., in which the scar of the excised area could be seen, as well as a small area 0·7 cm. × 0·6 cm. of superficial keratosis at the site of the molluscum sebaceum. There are no enlarged regional glands.

Histology.—At the biopsy level the overlying epidermis is intact, and except for one tiny area of union, is separated from the lesion by a small band of connective tissue. Essentially, there is a central mass of hyperkeratosis with papillomatosis surrounded by epithelium, which for the greater part consists of an acanthotic stratum malpighii with slight atypicality of the cells. In places the basal layer is missing, and in parts the epidermodermal border of the acanthotic stratum malpighii is being disintegrated and invaded by round cells and at times eosinophils. The corium on the sides and deep aspects of the lesion is œdematous together with an infiltrate of inflammatory round cells including some eosinophils (*see* Fig. 2).

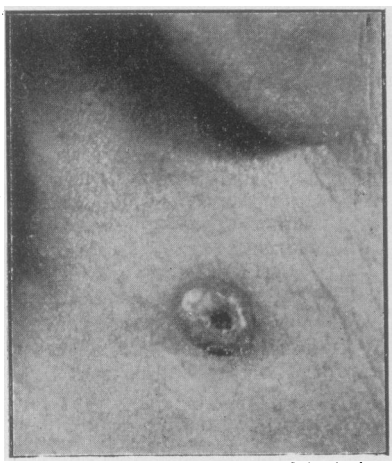

FIG. 1.—The appearance of the lesion before biopsy on February 3, 1950. (Natural size).

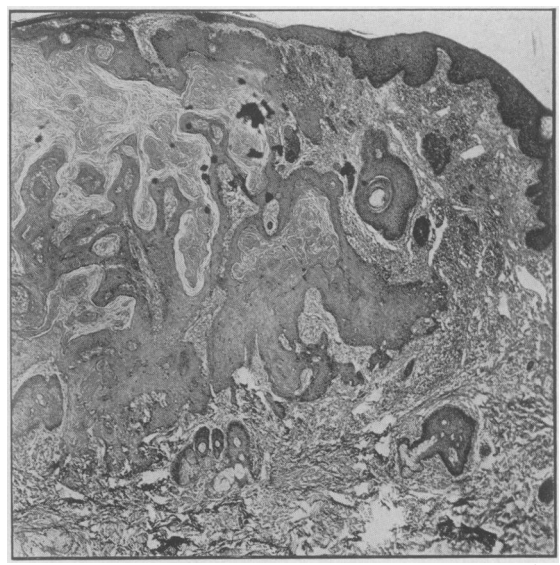

FIG. 2 (H. and E. × 18).—Half of biopsy shown. The central mass of hyperkeratosis with papillomatosis together with the acanthotic stratum malpighii is well seen. (The black marks in the upper part of the section are artefacts.)