

LETTER TO THE EDITOR

General Pustular Psoriasis: Pathogenetic Relationship between Pustule and Epidermal Sweat Duct

Sir,

We have with interest read the monography Psoriasis (1), in which Wright & Baker in their treatise on the histopathology of pustular psoriasis make the following statement referring to our paper in *Acta Derm Venereol* 1974 (2).

"It has been claimed that the intial events are at the acrosyringium causing sweat duct obstruction and pustule formation, but this has not been substantiated."

This statement is not correct and misrepresents our results. Discussing the role of the sweat duct, we concluded that: "the difference between pustular miliaria and the spongiform pustule is that the eliciting factor in the former has been shown to be the obstruction of the horny portion of the sweat duct, whereas no such changes have been observed in pustular psoriasis" (2).

It is remarkable that Wright & Baker have omitted other convincing studies on this and related subjects, concerning localization, which have fully confirmed our findings. Shelly et al. (3, 4) affirm in their study of pustular psoriasis "that it was possible by serial sections to find that the focal point for early pustular formation was indeed the epidermal sweat duct unit. The primary lesion of generalized pustular psoriasis has previously been shown to be similar to pustular miliaria but the precise localization has just been discerned by Neumann & Hård. In both pustular and regular psoriasis they found that the primary lesion arises at the acrosyringium. We can confirm that the leukocytes swarm to the terminal sweat duct."

Ogino et al. (5) haave found a connection of pustules in 6 out of 7 cases of pustular erythema either with the hair follicle or with the epidermal sweat duct, thus extending the pathogenetic significance of adnexa and pointing to the toxic basis of these pustules.

These are our remarks to a statement, made by Wright & Baker, which we find unjustified and incomprehensible.

REFERENCES

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4. Shelly WB, Graywood M, Beerman H. Pustular psoriasis elicited by streptococcal antigen and localized to the sweat pore. *J Invest Dermatol* 1975; 65: 466-471.
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Reply to the Letter by Hård & Neumann

We were interested to read the comments made by Hård & Neumann concerning our discussion of their work relating the formation of spongiform pustules and microabscesses in pustular psoriasis to events at the acrosyringium. We also thank

them for drawing our attention to their findings in more detail, and for making it clear that they do not believe sweat duct obstruction to be the initiating factor. Nonetheless, their paper certainly does state that initiating events occur at the acrosyringium (1). Their abstract states: "The cells supporting the lining membrane of the sweat duct were found to be involved in the spongiform process. The view is expressed that this causes the sweat duct to collapse, the wedge-shaped or crescent-shaped pustules being thus formed."

Of the two references by Shelley et al. quoted by Hård & Neumann, the second is a single case report of localized pustular psoriasis in which the pustules surrounded the terminal part of the intraepidermal sweat duct (2). Intraepidermal skin tests using streptococcal antigen produced a toxic pustular reaction in which the intraepidermal pustules were closely related to the sweat duct. A variety of other bacterial antigens produced no reaction. The other reference concerns 2 cases of generalised pustular psoriasis where the pustule bears no relation to the sweat duct (3). For example, the legend to Fig. 5 states "Note the sweat duct on the left side showing independence of pustule and sweat apparatus," and the legend to Fig. 6 "but the sweat duct continuity could not be established." We do not believe that these decidedly equivocal case reports comprise "convincing evidence."

The other work which Hård & Neumann refer to is that of Ogino et al. (4). This was a study of 7 patients with a "generalised pustular toxic erythema" which the authors clearly distinguish from pustular psoriasis. These reports suggest that toxic pustular eruptions rather than pustular psoriasis may well

develop in relation to the intraepidermal portion of the sweat duct.

While recent studies of the intraepidermal localization of neutrophil activating peptides (5) give further theoretical support to the concept that events at the acrosyringium may be the initiating factors in pustular psoriasis, we are still of the opinion that the case has yet to be substantiated.

REFERENCES

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