

BLISTER FLUID IN BULLOUS PEMPHIGOID

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Abstract. The blister fluid from three patients with bullous pemphigoid was studied by the indirect immunofluorescent technique and was found to have antibodies to the basement membrane. Blister fluid from several other blistering diseases was studied and found not to have these antibodies. The blister fluid from two patients with pemphigus contained antibodies to the intercellular areas of stratified squamous epithelium.

In 1964, Beutner & Jordon (2) reported that antibodies to the intercellular areas of stratified squamous epithelium were present in the sera of patients with pemphigus. Other investigators have subsequently confirmed these findings. Chorzelski et al. (4) and Bean (1) reported that blister fluid from patients with pemphigus also contains these antibodies. In 1967 Jordan et al. (5) reported antibodies to the basement membrane in the sera of patients with bullous pemphigoid. Triftshauer et al. (6) have mentioned that these antibodies also occur in the blister fluid of patients with bullous pemphigoid. Recently, we have had the opportunity to study the blister fluid and serum from three patients with bullous pemphigoid as well as blister fluid from patients with other blistering diseases.

METHOD

Guinea pig lip (mucosa), quick-frozen in liquid nitrogen, unfixed and sectioned at 4μ was used as the antigen. The serum and blister fluid from the patients were stored at -10°C and used at an initial dilution of 1:20. The procedure was then essentially the same as described by Beutner et al. (3). Blister fluid from patients with the following diseases was used as controls: one case of herpes simplex; one case of bullous erythema multiforme; five cases of contact dermatitis; two cases of dyshidrotic eczema; one case of dermatitis herpetiformis; two cases of pemphigus; one case of porphyria cutanea tarda; one case of swimmer's itch. In addition, blister fluid ob-

tained from normal persons with artificially induced blisters was tested. Liquid nitrogen and cantharidin were used as the blistering agents.

RESULTS AND DISCUSSION

Using the indirect fluorescent antibody technique we were able to demonstrate antibodies to the basement membrane in the serum and blister fluid from the patients with bullous pemphigoid. Antibody titers in the serum and blister fluid in patients studied were 1:640 and 1:160; 1:1280 and 1:640; and 1:640 and 1:640 respectively. The blister fluid from the control group of patients showed no basement membrane or intercellular antibodies.

The blister fluid in the serum from the two patients with pemphigus showed intercellular antibodies to the squamous epithelium as has been previously reported (1, 4). The antibody titers of the sera were 1:80 and 1:640. Unfortunately only a small amount of blister fluid was available for study and serial dilutions were not done.

Therefore, blister fluid as well as the sera from patients suspected of having either pemphigus or bullous pemphigoid may be used to demonstrate the immunologic changes characteristic of these diseases.

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