

DERMATOPATHOLOGY

NONINVASIVE METHODS FOR DIRECT IMMUNOFLUORESCENCE IN PEMPHIGUS VULGARIS

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Introduction: Pemphigus is a life threatening autoimmune bullous disease that involves the squamous epithelia and mucous membranes. Direct immunofluorescence (DIF) test in skin biopsy is regarded as gold standard (positive fish net pattern with IgG antibody)

Objective: A comparison of invasive (Skin biopsy) and non invasive (plucked hair, Tzanck smear and oral scrapes) methods of DIF in confirmatory diagnosis of pemphigus vulgaris

Materials and Methods: This study was done on 70 patients with vesiculobullous disorders. DIF was performed on skin biopsy along with 4-5 plucked anagen hair from the scalp, Tzanck smears and oral scrapes. Patients were classified as pemphigus and non pemphigus depending on positive DIF with IgG in skin biopsy, demonstrating a fish net pattern along with clinic-histopathology findings.

Results: In pemphigus group 33/35 patients were diagnosed as Pemphigus vulgaris and two pemphigus foliaceus. Majority of them presented with scalp lesions. Extensive oral lesions were present only in PV cases. In non pemphigus group, bullous pemphigoid was most common type of vesiculobullous disorder. Histopathology and DIF on skin showed 100% sensitivity in pemphigus cases. DIF on hair, oral scrapes and Tzanck smear in pemphigus cases showed sensitivity of 95.6%, 65.7%, and 69.2% respectively. Specificity of DIF on hair, oral scrape and Tzanck smear was 100%, 97.1%, 100% respectively.

Conclusions: Direct immunofluorescence of skin and hair are comparable in pattern and intensity. Sensitivity of hair DIF was high enough to allow us to suggest it as a substitute especially in remission period as it picks up potential cases likely to develop relapse. DIF on oral scrapes can be an additional simple and reliable method in the diagnosis of oral PV. DIF on plucked hair, oral scrapings and Tzanck smears is a simple, noninvasive method and obviates the need for punch biopsy or heavy investment in laboratory equipment.