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Short Communication

# Utility of Tzanck smear in cytology practice

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Tzanck smear was used in cytology practice since long time.In 1947, Frenchman Arnault Tzanck used this technology for the first time to diagnose blistering lesions mainly on herpes simplex.[1] Due to its cost effective nature -cheap, rapid and opd procedure, noninvasive technique gain popularity in dermatopathology practice in various cutaneous disorders mainly in vesiculobullous disorders.[2] Proper technique and right interpretation is required before diagnosing such lesions.

The procedure to prepare Tzanck smear is simple on blistering disorders. By using blunt scalp end gently deroof the lesion, scrap the base of the lesion and spread material on clean glass slide. After drying and fixating the smear stain with rapid stains like toluidine blue, giemsa or fields stain as hardly requires 1 to 5 mins.[3]

We encountered Tzanck smears for diagnosis of vesiculobullous lesions mainly in pemphigus group of disorders. It is very useful in early diagnosis of immunobullous conditions. Mainly in oral pemphigoid patients as biopsy is very discomfortable in such scenario and problematic ones.[3] Rapid and early diagnosis was yield by this procedure in pemphigus vulgaris.It showed acantholytic cells-are large round keratinocytes with increased ratio of nucleus to cytoplasm with occasional prominent nucleoli and abundant basophilic cytoplasm without leucoyte adherence. Many of the acantholytic cells showed perinuclear halo (Figure 1) is characteristics of pemphigus vulgaris disorders. In bullous pemphigoid, few acantholytic cells are there with leucocytes adherence and prominence of eosinophils noted.[1–3] In herpes simplex and zoster disorders, characteristic multinucleated giant cells with ballooning degeneration with acantholytic cells are seen. Few eosinophilic inclusion bodies are noted in

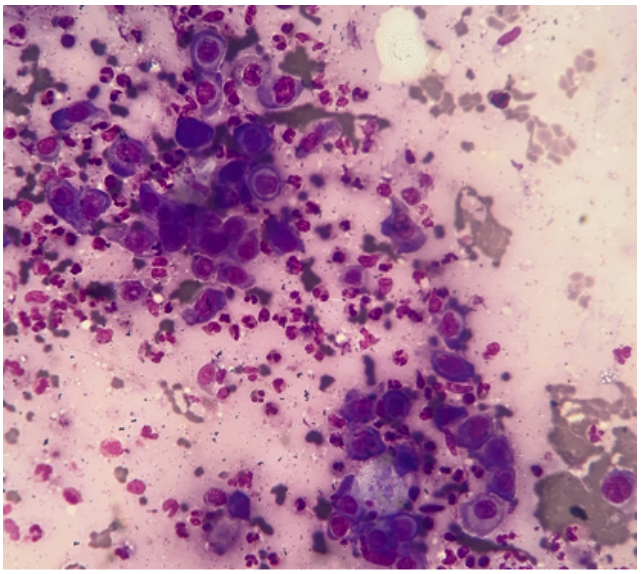

**Figure 1:** Acantholytic cells with nuclear hyperplasia and perinuclear halo in basophilic cytoplasm (TB,x400)

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sqamous cells giving rise to clue of viral cytopathic effects and herpes etiology. Many other diagnoses are suggested by Tzanck smear are bacterial and fungal infections, protozoal infections and skin malignancies etc.[3]

Due to many recent advances in modern medicine like viral cultures, histology and immunohistochemistry, PCR, electron microscopy and immunofloroscence, this technique is not used frequently in spite of many advantages.[1] In Indian scenario, limited studies of Tzanck smear cytology are available. Hence more studies should be encouraged of this diagnostic modality as cheap, rapid, convenient and well tolerated technique on opd basis. Few demerits are also there of this technique as interpretative errors, some missing and similar findings between two diseases and false negative results but these will be overcome by experts in cytology fields.[2]

Tzanck smears in cytology used as adjuvant to histology in prime and early diagnosis of bullous lesions in dermatopathology. It is used as screening technique in many cutaneous disorders. More number of studies should be conducted for more utility of this technique in modern cytopathology.

## Conflict of Interest

None.

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