

## A study of biophysical profile of skin of inguinal skin - An implication for health and disease

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### Abstract

Inguinal skin is prone to various infectious dermatological conditions like – erythrasma, intertrigo, hidradinitis suppurativa, folliculitis, dermatophytic infection and various sexually transmitted diseases.

This study attempts to compare the biophysical profile parameters of the genital skin taking skin of the upper back as control, so as to find out, if there is a difference in BPPs in inguinal skin and rest of the body and that how the change in the BPPs, bring about change in microbiome and make inguinal skin more prone to infections.

We did a hospital based comparative study conducted over 976 patients (600 males and 376 females) , Age distribution (18-65years), where BPP parameters- Hydration, skin pH, TEWL, and sebum content were measured over skin of upper back and right inguinal region and the results were summarized and presented as proportions (%). Chi-square test was used to compare abnormal findings. ‘P’ value  $\leq 0.05$  was taken as significant. Medcalc 16.4 version software was used for all statistical calculations.

Significant difference was noted in skin pH, TEWL and skin hydration, p value came out to be  $<0.05$  which was significant, whereas there was minimal difference in Sebum content in both the areas.

Raised skin pH disturbs organization of lipid bilayers (disturbed barrier), decreases lipid processing (impaired SC cohesion) and increases serine proteases activity (reduced AMP). Increased TEWL (defect in physical barrier) and decreased Hydration predispose the genital skin to infections. Use of pH buffered solutions (3-4), barrier repair creams containing ceramides, and barrier protective creams with dimethicone, protection from trauma and friction can help prevent these inguinal dermatosis.

### Biography:

Dr. Puneet Bhargava is working as senior professor at department of dermatology, SMS Medical College, Jaipur, INDIA. He has around 80 publications in international and national journals. He was a Gold Medalist and is presently Editor of Indian Journal of Sexually Transmitted Diseases. His key interest areas include- vitiligo, leprosy, cutaneous drug reactions, and study of basic physiological functions of skin.



### Speaker Publications:

1. Skin Barrier Function Defect - A Marker of Recalcitrant Tinea Infections, Indian Dermatology Online Journal
2. Efficacy of Metformin in the Treatment of Acne in Women with Polycystic Ovarian Syndrome: A Newer Approach to Acne Therapy, Journal of Clinical and Aesthetic Dermatology
3. Eruptive syringoma: A rare case report, Clinical Dermatology Review
4. Insignificant Correlation between Thyroid Hormone and Antithyroid Peroxidase Antibodies in Alopecia Areata Patients in Northern Rajasthan, International Journal of Trichology

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