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Antidandruff properties of Zinc PCA and Piroctone Olamine accompanied with herbal extracts

Saharnaz Rakizadeh¹, Azadeh Izadyari², Yones kafi³ and Masood Sahraiy³

¹University of Tehran, Iran

²Azad University of Science and Research branch, Iran

³Research Company Pars Azmaye Teb (Cerita), Iran

Nowadays more than half of the population in the world is suffering from dandruff, followed by hair loss, irritation, white flakes and itchy scalps. The mentioned disorder is mainly caused by oil dependent fungi due to exceeding sebum and di-hydrotestosterone (DHT). DHT stimulates sebaceous glands to produce excessive sebum; Therefore, fungi such as *Malassezia* secretes lipase to cleave sebaceous triglycerides into free fatty acids for consumption, also increase amount of unsaturated fats to penetrate into the epidermis and induce irritation and flaking. In Ceritaanti dandruff Shampoo (PZ+), *Zincpyrrolidone carboxylic acid* (Zinc-PCA) 1% and *piroctoneolamine* (PO) 1%, are combined with herbal extracts. Zinc-PCA and PO, decrease unwanted sebum secretion and inhibit resistant dandruff. In this experiment, 30 sufferers (above 12) with highly resistant dandruff were closely observed. After four weeks, results revealed dandruff and related hair loss inhibition, followed by itching and inflammatory remove. In PZ+, herbal extracts such as *Punicagranatum* has effective antidandruff properties due to punicalagin, also β -sitosterol and ellagic acid are anti-itching and anti-inflammatory compounds. On the other hand, Cineole and α -pinene in *Rosemarinus officinalis* reduce fatty acid peroxidation, results to fungi growth inhibition in pH=5-6. Interestingly, α -bisabolol and luteolin as anti-inflammations, inhibit cox-1, cox-2 and prostaglandin synthesis, in addition, Azulene and coumarin inhibit histamine release. Ursolic acid in *Urticadioica* and mentolin *Menthapiperita* respectively, inhibits 5- α -reductase and promotes blood flow to nourish follicles. To conclude, combination of Zinc-PCA and PO augment resistant dandruff inhibition and herbal extracts reduce chemical side effects furthermore increase therapeutic effectiveness.

Biography

Saharnaz Rakizadeh has completed her Master in and graduated from University of Tehran, Iran, in 2012. Her thesis was on researching about medicinal herbal extracts (microbial effects, phytochemistry, pharmaceutical affairs and ...) She is researcher and manager of Science Department in a big Pharmaceutical research company - Pars Azmaye Teb (Cerita) - She has many conferences and presents in scientific meetings.

saharnaz.rakizadeh@gmail.com