



INFLAMMATORY SKIN DISEASES (OTHER THAN ATOPIC DERMATITIS & PSORIASIS)

## **EFFECTS OF TOPICAL 5% HYALURONIC ACID AND A BACTERIAL-WALL-DERIVED GLYCOPROTEINS AND PEPTIDE GLYCANS (GPPG) COMPLEX ON FACIAL MICROBIOMA IN SUBJECTS WITH SEBORRHEIC DERMATITIS**

*Roberta De Grandi<sup>(1)</sup> - Marta Bottagisio<sup>(1)</sup> - Alessandro Bidossi<sup>(1)</sup> - Elena De Vecchi<sup>(1)</sup> - Massimo Milani<sup>(2)</sup>*

*Irccs Orthopedic Institute Galeazzi, Laboratory Of Clinical Chemistry And Microbiology, Milan, Italy<sup>(1)</sup> - Cantabria Labs Difa Cooper, Medical, Caronno Pertusella, Italy<sup>(2)</sup>*

**Introduction:** Seborrheic dermatitis (SD) is a chronic inflammatory skin disease that affects skin regions rich in sebaceous glands, such as face and scalp. Although the causes of SD are not completely understood, it has been recently suggested that a skin barrier impairment and an imbalance of bacterial species colonizing the skin can contribute to the pathophysiology of SD.

**Objective:** The aim of this study was to evaluate the clinical effects and the modification of facial skin microbiota composition of a 6-week topic treatment of a topical product in cream formulation containing hyaluronic acid 5% complexed with and a mix of a bacterial-wall-derived glycoprotein and peptide glycan complex (GPPG-complex) with a known immunomodulator action.

**Material and Methods:** Seventy-four subjects suffering from SD were recruited in this multicenter study. Clinical efficacy data are object of another abstract presentation. Two skin swabs series were collected before and after six weeks of treatment. Skin swabs were performed in three different face areas (2 involved areas: glabella and nasolabial fold; one non-involved area: mandibular rim). Changes in the skin microbiota composition were detected by using a 16Sr RNA gene sequencing approach.

**Results:** After 6 weeks, a slight increase in bacterial diversity was observed. An increase in the abundance of *Propionibacterium* spp. associated with a drop of *Staphylococcus* spp. presence ( $p=0.001$  vs. baseline) were detected in involved areas. *Staphylococcus* spp was reduced ( $p=0.05$ ) in non-involved area.

**Conclusions:** Topical application of a hyaluronic 5% and GPPG complex based product is able to restore a balance in the skin microbiota of SD patients by acting on





Propionibacterium spp. and Staphylococci spp. balance which is known to be associated with an altered skin microbioma in SD.

