First experiences in use of a monofilament fibre pad* in treatment of patients suffering from retentive and cystic manifestation of acne

Thomas Eberlein1, Cornellia Wiegand2, Claas Roes3, Martin Abel1

1 Dermatologist (Leipzig, Germany), 2 Department of Dermatology, University Medical Center Jena (Jena, Germany), 3 Lohmann & Rauscher GmbH & Co. KG (Rengsdorf, Germany)

INTRODUCTION
Acne vulgaris is a common problem in youth and early adolescence and it is characterized by areas of skin with increased oil excretion (seborrhoea) and formation of comedones, papules, pustules, as well as nodules [Zouboulis et al. 2005; Zouboulis 1999]. Often, scarring is the result of the inflammatory processes within the dermis. Acne vulgaris traces back to an enlargement of sebaceous glands and an enhancement in sebum production linked to an increased production of sexual hormones (e.g. androgens). Acne then develops when sebaceous glands becoming clogged with sebum (micromedida). These microcomedones are able to enlarge to form an open comedo (so called “blackhead” due to the fact that oxidation of sebaceous material at the porus is changing colour) or closed comedo (also called “whitehead” and often associated to cystic sebum retention). Typically, under such conditions naturally occurring bacteria can cause inflammation, leading to inflammatory lesions (papules, infected pustules, or nodules) in the dermis around the microcomedo or comedone [Nast et al. 2012]. For management of acne, any different treatment recommendations exist, including different pharmacologic and non-pharmacologic opportunities to remove the sebaceous clogging [Nast et al. 2012]. They are aimed to normalize shedding and sebum production to prevent blockage of pores. Additionally, reduction of microbial bioburden, excretion of anti-inflammatory effects, and manipulation of hormone production are in therapeutic focus. Additionally, a strict regime for skin lavation is recommended to remove surplus sebum and prevent clogging. Thus, however, can be supported by effective mechanical removal of excessive sebum formation. This could be achieved by using a monofilament fibre debridement pad (Debrisoft®; Lohmann & Rauscher), which has been designed to provide fast, effective mechanical removal of proteinaceous crusts that is pain- and trauma-free. First in-vitro testing [Wiegand 2015] was able to demonstrate efficacy in cleaning by using the debridement model with artificial sebum.

METHOD
During a time period of four months, a semi-systematic case series was performed in young people suffering from retentive manifestation of acne vulgaris to collect practical aspects of the use of the monofilament fibre pad in combination with typical dosage forms of polyhexanide (PHMB) and Sodium-hypochlorite based solutions (medical devices) in order to achieve first practical experiences in combined use. This small case series was focused on comfort aspects, acceptance and clinical benefit in use. Application has taken place periodically thereafter as necessary daily up to twice weekly.

TABLE 1: Results
With regard to the main aspects, the following results were achieved (n=7):