

## Vulvovaginal Photodynamic Therapy in Genital Erosive Lichen Planus

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Anne Lise Ording Helgesen, dermatologist at Oslo University Hospital and the Norwegian National Advisory Unit on Women's Health, recently defended her thesis titled "Vulvovaginal photodynamic therapy in genital erosive lichen planus" for the degree of PhD at the University of Oslo. Opponents were Professor Ann-Marie Wennberg-Larkö, Sahlgrenska Academy, Gothenburg, and Associate Professor Nina Bohm-Starke, Karolinska Institutet, Stockholm.

Genital erosive lichen planus (GELP) is a chronic inflammatory disease characterized by painful vulval and vaginal erosions and limited treatment options. Topical photodynamic therapy (PDT) is increasingly used in premalignant and malignant diseases and may also have an effect in inflammatory disease.

The aims of the studies on which this thesis is based, were to describe the clinical and histopathological characteristics of GELP in women diagnosed at a specialized vulva clinic, with special emphasis on vaginal involvement and sexual function, and to conduct a randomized controlled trial (RCT) in women with GELP, comparing one session vulvovaginal PDT with daily application of topical corticosteroids for 6 weeks. Prior to the RCT, we performed a study on the biodistribution of protoporphyrin IX (PpIX) after topical application of hexyl 5-aminolevulinate (HAL) gel on genital mucosal surfaces in order to determine an adequate dosage and application time of HAL to be used in the RCT study.

Vaginal involvement was seen in 49 out of 58 women with GELP. Information about sexual function was reported by 51 women, of whom 46 reported sexual abstinence or dyspareunia (1). Application of 2 ml HAL 6.25 mg/ml for 3 h was found to be adequate for absorption and conversion to PpIX in submucosal inflammatory cells, characteristic for GELP, and giving no systemic absorption (2). In the RCT, 40 women with GELP were randomized to either one session with HAL-PDT ( $n=20$ ) or daily application of topical corticosteroids for 6 weeks ( $n=20$ ). Three patients in the corticosteroid group withdrew after 1–3 weeks. At week 6 and 24, we were not able to demonstrate any significant differences in the reduction of clinical and symptomatic scores between those treated with PDT and those treated with topical corticosteroids, the former group reporting significantly less use of topical corticosteroids in weeks 7–24. Some pain and discomfort during PDT occurred, but adverse effects were few and mild (3).

In conclusion, vaginal involvement in GELP seems to be more frequent than described in other studies. Vulvovaginal PDT,



Fig. 1. From left to right: Frode Jahnsen (3<sup>rd</sup> member of the Assessment Committee), Anne Lise Ording Helgesen, Nina Bohm-Starke (Opponent), Anne Olaus Olsen (Acting Dean) and Ann-Marie Wennberg-Larkö (Opponent).

using HAL as photosensitizer, seems to be a feasible, effective and safe treatment in women with GELP.

### References

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