Topical Podophyllotoxin in Psoriasis vulgaris

F.		Wantke ^a
G.		Fleischl ^a
M.		Götz ^{a,b}
R.		Jarisch ^a

^aDermatologic and Pediatric Allergy Clinic, Vienna; ^bDepartment of Pediatrics, University of Vienna, Austria

Felix Wantke, MD, Dermatologic und Pediatric Allergy Clinic, Franz Jonas Platz 8/6, A-1210 Vienna (Austria)

Podophyllotoxin is a local cytostatic drug used commercially for treatment of condylo-mata acuminata. Lassus and Rosen [1] treated psoriatic patients with podophyllotoxin on an ointment basis. Orbaneja et al. [2] investigated systemical use of podophyllotoxin in psoriasis. We tested the applicability of 0.5% podophyllotoxin solution in the topical treatment of psoriasis in order to assess the efficacy and safety of this form of preparation. 11 patients (3 female, 8 male) with chronic stable psoriasis were investigated. The average age was 46.5 ± 13 years (34-69). 10 patients had psoriasis vulgaris, 1 patient had psoriasis inversa at the inguinal region. We used podophyllotoxin 0.5% in buffered ethanolic solution available as Condyllox® 0.5% (Gerot Pharmazeutika, Vienna). A plaque was selected, preferentially at the side of the elbow or knee, in order to facilitate comparison of treated and untreated side of the body. The mean treated area was 25 cm², daily application was 0.5 mg podophyllotoxin. The solution was applied once per day with a cotton wool pad by the patient himself, but was not washed off. Prior to application the treated area was washed twice with water. The other psoriatic plaques were not treated or treated only with emollients. Patients were advised not to drink alcohol for several hours after application to prevent systemical uptake of podophyllotoxin. Treatment duration was at least 4 weeks; assessments were done after 4 weeks individually. Informed consent was obtained throughout.

Out of 11 patients only 2 (1 female, 1 male) showed a clear regression: scaling and thickness showed clearcut regression after 4 weeks, after 12 weeks a 25-cm² plaque on the knee of 1 patient disappeared completely.

The untreated plaque in the contralateral knee showed no change compared to treatment commencement. In 9 patients there was practically no difference between the treated and untreated plaques. The scaling of the plaques regressed slightly, the intensity of itch decreased in 10 out of 11 patients on the treated side, which would indicate an anti-inflammatory action of podophyllotoxin. All patients experienced the treatment as 'pleasant'. One patient complained of burning pain and erythema of the treated area after which treatment was stopped after 2 weeks of application. In none of the other patients local or systemic side effects were observed.

Podophyllotoxin 0.5% in an alcoholic solution has not been used so far in the treatment of psoriasis. As a lipid soluble substance podophyllotoxin should penetrate through the skin without difficulty [3]. The fact that podophyllotoxin showed only a relatively negligible efficacy in our series would indicate that the application in alcoholic solution does not penetrate sufficiently.

Lassus and Rosen [1] used 0.5, 0.25 and 0.1% concentrations, however they used an ointment base as a medium which would explain the better response to treatment.

Local treatment with 0.5% podophyllotoxin in alcoholic solution shows a weakly positive result (considerable improvement in 2 patients) in the treatment of psoriasis. The tolerance of the treatment is very good, the compliance of the patients is high. Side effects (burning sensations and reddening) were only observed in 1 patient.

Although podophyllotoxin seems of little use in this form of application, it may be useful in treating the hairy scalp which otherwise is hardly accessible to local treatment.

References

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\$ 2.75/0