

Treatment of Therapy resistant Verrucae Plantares with Laser assisted photodynamic Therapy with Methyl Aminolevulinic Acid

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Background

We present a 55-year-old male patient with a history of painful, extensive mosaic warts located plantar left lateral located in the area of the metacarpals, resistant to multiple therapeutic approaches.

Observations

Therapy according to the guidelines, using topical treatments with salicylic acid, formic acid, podophyllin, 5-fluorouracil and imiquimod were ineffective, as well as surgical interventions using cryosurgery, curettage and laser surgery. Other therapeutic attempts with vascular lasers as described in the literature, including the long-pulsed Nd:YAG laser (1064nm) or a yellow dye laser (577nm) also did not show therapeutic success [1]. We refrained from the therapeutic option of surgery due to the risk of infection, long downtime and especially the high risk of recurrence [2]. Individual case reports show therapeutic success after **laser assisted drug delivery (LADD) of methyl aminolevulinic acid (MAL) for photodynamic therapy (PDT)** [3].

Our patient was treated **four times** with **LADD-PDT with MAL** at intervals of three to six weeks. Pretreatment was performed using a **randomized ablative fractional eCO2 laser (10600nm)**. 2g of MAL cream was applied under occlusion for 60 minutes followed by irradiation with a red-light source. Using this therapeutic regimen, the patient has now been free of recurrence for over six months.

Conclusion

- Mosaic warts are a type of verrucae vulgares which occur almost exclusively on the soles.
- They are particularly known for their therapy resistance and high recurrence rate.
- **Photodynamic therapy (PDT) with laser assisted drug delivery (LADD) of methyl-aminolevulinic acid (MAL)** offers an option with minimal pain and with hardly any side effects for the therapy of resistant cases of verrucae plantares.
- A pretreatment with a strong **ablative fractional laser** is especially important in order to obtain a deep penetration of MAL through the thick plantar horny layer.
- It should be noted that this treatment is an off-label use.

Literatur:

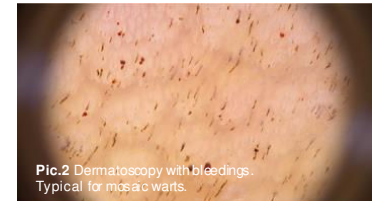
[1] 10.1007/s00105-002-0415-z. [2] 10.1001/archsurg.1953.01260030449010 [3] Gold MH, Pope A. Fractional resurfacing aiding photodynamic therapy of a recalcitrant plantar verruca: a case report and review of the literature. J Clin Aesthet Dermatol. 2008 May;1(1):30-3. PMID: 21103307; PMCID: PMC2989808

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Pictures



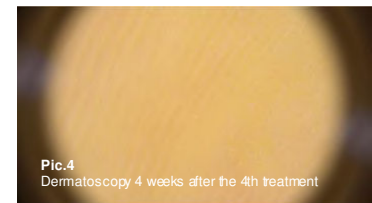
Pic.1
Mosaic warts with confluent beetle structure



Pic.2 Dermatoscopy with bleedings.
Typical for mosaic warts.



Pic.3
4 weeks after the 4th treatment.



Pic.4
Dermatoscopy 4 weeks after the 4th treatment