



SKIN CANCER (OTHER THAN MELANOMA)

## **OXYGEN FLOW ASSISTED TRANSCUTANEOUS ADMINISTRATION OF METHOTREXATE: EFFICACY, SAFETY AND TOLERANCE IN PATIENTS WITH PAGETOID BASAL CELL CARCINOMA, MYCOSIS FUNGOIDES AND EXTRAMAMMARY PAGET'S DISEASE.**

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Introduction: The high molecular weight of methotrexate (MTX) hinders cutaneous penetration following topical application. Oxygen flow enhances cutaneous permeation.

Aim: This exploratory study assessed the clinical feasibility, efficacy, safety and tolerance of oxygen flow administered MTX (OFAMTX) for pagetoid basal cell carcinoma (PBCC), extramammary Paget's disease (EMPD) and mycosis fungoides (MF).

Materials and Methods: Patients with PBCC (n=5), EMPD (n=4), MF classic type (n=8) and folliculotropic MF (n=3) were treated with 4 weekly applications of 5% OFAMTX. Photographical records and biopsies were performed before and one month after treatment.

Results: PBCC, EMPD and MF responded well to OFAMTX, with 4/5, 4/4, 7/8 and 1/3 good clinical responses and 4/5, 3/4, 7/8 and 0/3 histological healings, respectively. Tolerance was generally considered as good and no pain was observed during and after treatment sessions. Pharmacokinetics never revealed detectable MTX levels and no liver, renal or hematologic alterations were detected at 24, 48 and 72 hours post treatment.

Conclusion: OFAMTX displays a potential therapeutic action on PBCC, EMPD and MF classic type, while avoiding systemic MTX related adverse effects. Larger cohort studies should be performed to confirm these pilot data.

