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The effect of aminolevulinic acid photodynamic therapy on microcomedones and macrocomedones.

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Source

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Abstract

BACKGROUND:

Photodynamic therapy (PDT) with aminolevulinic acid (ALA) has been shown to be an effective treatment for acne. However, the effect of ALA PDT on comedo formation has never been objectively evaluated. Cyanoacrylate follicular biopsy (CFB), a noninvasive procedure, has been proposed as the most reliable tool for studying follicular casts.

OBJECTIVE:

To determine the possible effect of ALA and red light (550-700 nm) on macro- and microcomedones in acne patients.

PATIENTS AND METHODS:

10 patients with mild-to-moderate facial and/or chest/back acne resistant to conventional therapies received ALA PDT at 2-week intervals in 3 sessions. The severity of acne had been estimated by a system of points, the Global Acne Grading System. The patients underwent PDT utilizing ALA 10% (face) or 15% (back/chest) and red light (15 J/cm²) each session. CFBs were performed.

RESULTS:

Four weeks after their last PDT session, the patients showed an average global score reduction of 50%. CFBs demonstrated a reduction in the total area, the average area and the density of macrocomedones.

CONCLUSION:

The results obtained in this study using CFB evaluation demonstrate that ALA PDT exerts an action on the comedogenic phase as well.