

COMPARISON OF INTENSE PULSED LIGHT AND PULSED DYE LASER FOR THE TREATMENT OF PORT WINE STAINS: A LEFT-RIGHT TRIAL OF EFFICACY AND ADVERSE EFFECTS.

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Objective: The pulsed dye laser (PDL) is known to be the gold standard for the treatment of port-wine stains (PWS). In an open prospective study the efficacy of the PDL was compared to an intense pulsed light (IPL) source. **Materials and methods:** 67 PWS patients have been treated with both a PDL (PhotoGenica-V Star, Cynosure, USA; parameter: 595 nm, 7-10 mm, 0,5 ms, 4,6-7,8 J/cm²) and an IPL system (Ellipse Flex, vascular applicator, DDD, Denmark; parameter: 555-950 nm, 8 ms, 14-19 J/cm²). Each PWS was divided in pairs of equally red areas. The left-right trial was continued with repeated treatments in 6-8 weekly intervals until one side showed superior clearance. Differences in clearance were judged by blinded uninvolved examiners using before and after photographs. The following side effects were evaluated: Purpura, pigmentary changes and scarring. **Results:** So far in 13 patients (8 f, 5 m, aged 2-58 years, average 22,6 years) with 19 different areas the trial was finished. All together 85% of the treated PWS responded with clearing. Better clearing by PDL was seen in 13%, whereas IPL was superior in 42%. No differences in clearing was recorded in 31%. Beside purpura following each PDL treatment as long term adverse events were recorded hyperpigmentation and hypopigmentation, each once in PDL. **Conclusion:** Pulsed dye lasers have been the treatment of choice for PWS. However clearance rates vary widely and are in many patients incomplete. These preliminary data suggest the IPL technology as a superior and safe treatment option for PWS.