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COMBINED PHOTODYNAMIC AND PULSED DYE LASER TREATMENT OF PORT WINE STAINS

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Background and Objective: Pulsed dye laser (PDL) treatment of port wine stain (PWS) birthmarks is the standard of care but most lesions do not achieve complete blanching and some resistant lesions respond minimally. This study will determine the effectiveness of photodynamic treatment (PDT) alone and in combination with PDL (PDT + PDL) as compared to PDL alone for treatment of PWS.

Materials and Methods: Patients with non-facial PWS had four separate 2 cm² circular areas identified within the PWS, the first serving as a control. A second area was treated with PDL (585 nm, 10 mm, 6–8 J/cm², 30 ms cryogen spurt, 20 ms delay). Subjects were then infused with liposomal benzoporphyrin derivative-monoacid ring A (Visudyne, QLT Inc., Vancouver, Canada; 6 mg/m² body surface area) over 10 minutes. Five minutes following the end of the infusion, the third and fourth test sites were treated with CW argon-dye laser (576 nm). One of the PDT-treated spots was also treated with PDL as described above. The PWS was photographed and colorimetry performed before as well as immediately, 1, 2, 4, 8, and 12 weeks after treatment.

Results: PWS lesions showed differential blanching with PDT + PDL as compared to PDT alone, PDL alone, and control.

Conclusion: PDT and PDT + PDL warrants additional investigation and may represent a promising treatment for difficult PWS lesions.