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BEYOND AREA REDUCTION: PULSED DYE LASER TREATMENT OF BASAL CELL CARCINOMA IN A PRELIMINARY REAL-WORLD COHORT**G. Frattin^{1,2}, A. Bolzon^{1,2}, E. Pezzolo¹, L. Germini¹, L. Gnesotto¹, A. Corrà¹, G. Mioso¹, Z. Fratton¹, L. Schiesari¹**¹UOC Dermatologia, Ospedale San Bortolo, Vicenza, Italy; ²Università degli Studi di Padova, Clinica Dermatologica, Italy**Keywords:** Basal Cell Carcinoma, Pulsed Dye Laser.

Background. Pulsed dye laser (PDL) is a minimally invasive option for selected basal cell carcinomas (BCCs). Current evidence supports a potential role when surgery is difficult, poorly accepted, or contraindicated, but studies remain heterogeneous and mainly focus on clinical or histological clearance. In nodular BCCs, area-based assessment may be insufficient, as response may occur predominantly along the vertical axis.

Methods. We analyzed a preliminary real-world cohort of patients with histologically confirmed primary BCC treated with 595-nm PDL. Baseline variables included age, lesion site, histologic subtype, risk area, maximum diameter, calculated elliptical area, and clinically measured thickness for nodular lesions. Treatment parameters, pain visual analogue scale (VAS), adverse events, clinical and dermoscopic clearance, and morphometric changes were recorded. For nodular BCCs, thickness reduction was calculated by comparing each lesion at baseline and latest follow-up.

Results. Seventeen patients with 26 primary BCCs were included: 13 superficial and 13 nodular. Patients were predominantly older, with a mean age of 72.4 years, and several lesions were treated in a context of surgically difficult or infeasible management. Twelve lesions had follow-up assessment. At latest follow-up, mean area reduction was 40.6% overall. Superficial BCCs showed greater area reduction than nodular BCCs (59.7% vs 21.5%), with complete or partial clinical and dermoscopic clearance in all evaluable su-

perficial lesions. Conversely, nodular BCCs showed modest area reduction but marked thickness decrease, with mean and median percentage reductions of 49.4% and 45.0%. Treatment was well tolerated, with mean pain VAS of 1.44/10, no anesthesia, and no major adverse events. Two minor bleeding events were recorded during follow-up.

Conclusions. In this preliminary cohort, 595-nm PDL showed a favorable tolerability and safety profile in selected BCCs, particularly in older patients and surgically challenging cases. Superficial BCCs showed greater area reduction and higher clinical and dermoscopic response than nodular lesions. The main innovative finding is that, in nodular BCCs, thickness reduction was substantially greater than area reduction, suggesting that conventional area-based endpoints may underestimate response. Subtype-specific morphometric assessment, including thickness measurement, may improve response evaluation in future PDL studies.

References

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