Table 1 Summary of laser modalities for PPP: Devices, parameters, and outcomes

Modality/Study	N (Patients)	Laser Device & Key Parameters	Anesthesia	Sessions (n)	Clearance Rate (%)	Complications	Healing Time	Follow-Up	Comments
CO_2 (Deda, et al.,[13])	10	CO_2, 10 mJ/cm², 1.5 mm, 60 W, pulse	9% lidocaine cream	2–3	100	None	7–10 days	NR	Point-by-point, no pain
CO_2 (Krakowski[23])	1	CO_2, 100 mJ, 10 W, macrofractional	1% lidocaine inj + ice	1	>90	None	5–7 days	6 months	Adolescent case, rapid return to activity
CO_2 (Gan & Graber[14])	2	CO_2, 100–150 mJ/cm², DeepFX, 3–4 mm	30% lidocaine occlusion	2–3	100	None	3–5 days	NR	Fractional, no pigment change
CO_2 (Maranda, et al[16])	7	100–22,000 mJ/cm², 1 session (most)	Topical or local	1 (most), 2–3 frac	100	None	NR	Up to 6 months	Systematic review data
Fractionated CO_2 (Rivera[18])	20	iPixel CO_2, 10 W, 100 ms on/off	7% lidocaine/tetracaine	1 (6 pts), 2 (14)	100	30% minor, 1 pain	7–10 days	3–12 months	90% not circumcised
PDL (Sapra[7])	4	Mini V, 595 nm, 5 mm, 6–10 J/cm²	23/7% lido/tetra cream 1 hr	1–3	75–100	Minimal bruising	NR	NR	Nonablative, no infection/scarring
PDL (Maranda, et al[16])	4	600–1,000 mJ/cm², 1–3 sessions	Topical anesthetic	1–3	100	1 mild pain	~1 week	NR	Systematic review
Er:YAG (Maranda, et al[16])	45	400–500 mJ/cm², 1.5–3 mm, 8–10 Hz	Topical	1–6 (avg 2)	100	Minor capillary bleed	<2 weeks	1 year	No pigment/scarring
Er:YAG (Aldahan[3])	45	400–500 mJ, spot 1.5–3 mm	Topical	1–6	100	None	<2 weeks	1 year	Cleared even after failed other tx
1550-nm Erbium	1	20 mJ pulse, 5 sessions, FP	Topical	5	100	Mild erythema	NR	1 year	Painless, no open wounds

Abbreviations: NR = not reported; FP = fractional photothermolysis.