

Sunday, October 3  
10:10 AM-10:14 AM

**AUTHOR:** Vic A Narurkar, MD

**TITLE:** The Safety and Efficacy of a 400 Millisecond High Powered Diode Laser for Hypertrichosis in Skin Types IV to VI

**CO-AUTHORS:**

**A. Purpose for Presenting:**

Laser hair reduction in darker skin types has been limited by fluence and wavelength. While the long pulsed 1064nm laser has shown some efficacy, long term data and true efficacy on darker skin types remains unclear. The 755nm and 800nm wavelengths have limitations of fluence and pulse width on darker skin types. The 800nm high powered diode laser has been shown to be effective on the widest range of skin types but fluence and pulse width considerations have limited its use in very dark skin. We studied the safety and efficacy of a 400 millisecond high powered diode laser for hair reduction in skin types IV to VI for one year

**B. Statement of research design:**

27 patients, 9 from each skin type (IV to VI) were treated with the 800nm high powered diode laser (Light Sheer) at pulse widths of 100 milliseconds and 400 milliseconds with fluences ranging from 20 to 100 joules. Assessments were based on hair counts and before and after photography.

**C. Summary of results:**

Skin types IV tolerated the highest fluences (up to 80j), skin type V tolerated an intermediary fluence (up to 60j) and skin type VI tolerated the lowest fluence (up to 40j) but all skin types tolerated fluences that were at least twice those tolerated at 100 milliseconds and thrice those at 30 milliseconds. Greater efficacy was noted at higher fluences, resulting in greater hair reduction thereby necessitating fewer treatments.

**D. Statement of conclusions:**

The safety and efficacy of hair reduction in skin types IV to VI has been enhanced by the development of a 400 millisecond high powered 800nm laser that can deliver higher fluences. The extension of the pulse width allowed for higher fluences to be delivered in a safe and effective fashion on darker skin types.