

CASE REPORTS: TREATMENT OF ERYTHEMATOTELANGIECTACTIC ROSACEA WITH A KTP YAG LASER

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Abstract

The flushing and telangiectasias associated with rosacea are notoriously difficult to treat with standard medications. Newer technologies, namely medical lasers and light sources, have made it possible to control and improve erythematotelangiectatic signs of rosacea. The potassium-titanyl-phosphate laser in particular is an efficacious and safe tool for treatment of this disease.

Case Study

KM is a 39-year-old Caucasian male, Fitzpatrick skin type II. He states he has always had sensitive skin and blushes easily. Over the last 5 or so years his symptoms have progressed to a point of a consistent erythema and prominent vasculature of the face, involving mainly the nose and medial cheeks. He has used topical metronidazole in the past, which helped control the occasional papular breakouts but did not impact the flush or telangiectatic vasculature. He has no ocular involvement but is developing early signs of phymatous dysplasia.

KM was treated with the KTP YAG laser at 2 different settings with escalating fluence at each treatment. He currently has had 4 treatments, each approximately 6 weeks apart. He reports minimal side effects but did have some edema of the lower eyelids after the initial treatments, which subsided in 2 to 3 days. He reports no discomfort during treatments and denies any bruising, purpura, or burns. The patient reports an 80% to 90% improvement in his symptomatology.

Discussion

Rosacea is a chronic, pervasive condition of the facial skin that can cause significant emotional stigmata and cosmetic disfigurement if left untreated. It affects over 13 million Americans including such well know personalities as Bill Clinton.² Recently, a standard classification system of rosacea was developed by the National Rosacea Society

to clarify and facilitate communication regarding this disease. In addition to delineating a grading system, 4 basic subtypes of rosacea were identified: 1) erythematotelangiectatic, 2) papulopustular, 3) phymatous, and 4) ocular.³ Subtyping is useful in designing a treatment plan for

Figure 1. View of Left Side of Face Prior to First Treatment.



Figure 2. Close-up of Vessels on Left Cheek Prior to First Treatment.



Figure 3. Close-up of Vessels on Left Cheek after 2 Treatments, each Treatment Performed at 6-Week Intervals.



patients. Prevention of symptoms by avoidance of aggravating factors is often touted and can be helpful but is usually unrealistic for patients to implement. Traditional medication regimens have included oral and systemic antibiotics. These are most effective for the papulopustular subtypes and often the ocular subtypes. Occasionally, antibiotics will help with flushing and erythema, but this is thought to be due to anti-inflammatory effects and not any particular antimicrobial action.⁴ Unfortunately, treatment of phymatous and erythematotelangiectatic types has consistently proven to be more resistant to standard pharmacological agents.⁵ Laser treatments and surgical intervention may be helpful in these cases.

Until recently, the pulse dye laser has been the treatment of choice for the telangiectasis and flushing associated with the erythematotelangiectatic subtype of rosacea. The PDL is well known for its efficacy in treating congenital vascular lesions and would seem to be a natural fit. Studies, however, have yielded inconsistent results.^{6,7} This, in addition to hard to tolerate side effects such as prolonged purpura, makes it less than ideal for clinical use.

Figure 4. Left Oblique View of Cheek after 4 Treatments.



The latest addition to the laser armamentarium is the KTP YAG laser. Its relatively short wavelength at 532 nm and high affinity for oxyhemoglobin makes it ideal for targeting vasculature that is superficial in the skin. Unlike the PDL, which causes explosive vessel rupture and leakage, the KTP YAG allows for a slower, more gentle heating, coagulation, and collapse of the vessel.¹ This minimizes pain and purpura. The KTP YAG laser has the advantage of being able to produce high fluences like the PDL, but is able to deposit that energy over a longer period of time due to longer pulse widths. This allows for adequate thermal damage to the target, while minimizing damage to surrounding tissues. These characteristics make it ideal for treating the pathology involved in erythematotelangiectatic rosacea. As laser treatment becomes more common in the outpatient setting, the KTP YAG may prove to be the most useful modality for this stubborn form of rosacea.

References

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