Study: The primary objective of this study was to compare the efficacy and tolerability of combining 15% azelaic acid gel and IPL therapy in the treatment of mild to moderate rosacea. Patients were randomized to receive split area treatment with 15% azelaic acid gel. All subjects received 15% azelaic acid gel and were instructed to apply the study drug to one-half of the face, twice daily and instructed to not apply 15% azelaic acid gel for 48 hours prior to the IPL treatment. Subjects then continued to use 15% azelaic acid gel to one-half of the face for the duration of the study. Assessment of global improvement, telangiectasias, papules, pustules and nodules was performed at Screening/Baseline, week 2 (prior to IPL treatment), and week 6/End of Study. Patient questionnaires were completed at Baseline, Week 2 and at Week 6/End of Study visits. Standardized photography was completed at each of the three clinic visits.
Results: Eleven of 20 patients (9 females, 2 males), aged 34–65 years old (mean 46.5), completed the study at the time of data analysis. All patients had mild to moderate rosacea. A statistical significance was found in the investigator global assessment (using a 6 point scale) comparing baseline to day 42 in the 15% azelaic acid gel with IPL treated side ($P = 0.01$); compared to the IPL treated side. No statistical significance was found in the investigator global assessment (using a 6 point scale) comparing baseline to day 42. More improvement was also noted comparing baseline to day 42 with combination therapy using 15% azelaic acid gel and IPL versus IPL treatment alone, in the amount of telangiectasias, papules, and pustules (using a 4 point scale). Patient assessment of improvement from baseline to day 42 on the 15% azelaic acid gel treated side resulted in a statistically significant improvement in five categories: overall skin appearance, amount of acne bumps, skin dryness, amount of moisturizer needed, and overall assessment of skin. There was no statistically significant difference between patient assessment of facial itching, burning, irritation, redness, warmth, and overall skin comfort. There was no statistically significant difference between patient assessment of facial itching, burning, irritation, redness, warmth, and overall skin comfort. Only one patient noticed an increase in skin itching, which resolved by day 42, and of the four patients who noted skin burning at day 14, only one continued to report burning at day 42.
Conclusion: Combination therapy with 15% azelaic acid gel and IPL is more efficacious in the treatment of mild to moderate rosacea than IPL treatment alone. Combination therapy proved to be tolerable and patients noted more improvement in overall skin appearance, amount of acne bumps, skin dryness, amount of moisturizer needed and overall skin assessment with combination treatment versus therapy with IPL alone. Fifteen percent azelaic acid gel and IPL may be combined safely for the treatment of rosacea.
Limitations: Preliminary data are presented. This is a single-site study of a small cohort of patients followed for an average of 30.5 days at the time of data analysis. This study will be completed by October 31, 2010, by which time we will have followed all 20 patients for a total of 44 days, and all patients will have received 44 days of treatment with 15% azelaic acid gel.

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LASER DOPPLER INVESTIGATION OF TOOTH ARCHWIRE ENGAGEMENT

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Background: Any alteration in blood flow or vascular pressure caused by a trauma may damage the pulp tissue. Laser Doppler Flowmetry provides means of recording pulpal blood flow within teeth and has been described as a very sensitive method for tooth vitality evaluation. The purpose of this study was to evaluate the human pulpal blood flow changes after orthodontic forces application.
Study: Recordings were made of five volunteers scheduled for fixed orthodontic therapy, with interdental spaces between teeth 33–34 and 34–35 or 43–44 and 44–45. Pulpal blood flow was recorded by means of Laser Doppler Flowmetry for each of the 15 teeth, before treatment, 24 hours after the initial archwire engagement and 5 days later. The Laser Doppler Flowmetry probe was held in place by a splint constructed of a silicon impression material, to prevent instability and to permit reproducibility of the probe position. An opaque rubber dam was applied to the teeth during laser Doppler Flowmetry measurement. All data acquisitioned were collected and analyzed using specific software provided by the equipment producer.
Results: Student's t-test was used for statistical analysis. The comparison of basal pulpal blood flow during the three observation periods showed a significant pulpal blood flow decrease 24 hours after archwire engagement ($P < 0.005$), followed by a partial recovery 5 days after.
Conclusion: The results indicate that the measurement technique used in the study is able to detect pulpal blood flow changes produced by orthodontic force application and could be used as a diagnostic tool for determining aggressive forces over the pulpal biological limits of tolerance.

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CLINICAL EVALUATION OF LASER-ASSISTED SKIN HEALING AFTER NAEVI SURGERY

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Background: Previous evaluations have demonstrated that a novel 810 nm diode laser system could improve skin healing leading to a scar reduction. This technique named Laser Assisted Skin Healing (LASH) has demonstrated its efficacy in Plastic Surgery to improve the appearance of scars. This study aimed to demonstrate the interest of LASH in patients enrolled for nevi excision.
Study: Patients with two nevi were enrolled in this prospective study. Nevi were removed by simple surgical excision under local anesthesia. One incision was treated immediately after suturing with Ekkylite (Ekkyo, Aix en Provence, France). This 810 nm diode laser system delivers a top hat spot of 20 mm × 4 mm. The second incision served as an untreated control. Clinical evaluations, digital pictures on all scars were conducted at 7, 15, 90, and 180 days.
Results: Thirteen patients, on decoletage, limbs, back, face, phototypes I to IV were included. Seven days after surgery a reduced inflammation was noted on the LASH treated incision, at 3 months a quicker resolution on treated scar compared to the non-treated side. At 3 months no hypertrophic scar was observed on treated sites.
Conclusion: LASH is a new procedure already used in practice for aesthetic surgery, and it may have a great role in prevention of hypertrophic scar after dermatologic surgery.