

Pascal laser vs conventional laser in daily practice and diabetic retinopathy

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Advantages:

Pascal® is a short-pulsed patterned scanning laser photocoagulation system which offers the main advantages of applying multiple spots almost simultaneously in different patterns chosen on the basis of different available models. The operator can select arcs, circular grid or sections of grids or use a rectangular array of up to 25 burns. The shorter pulse durations require less total energy to produce burns, with consequently less spreading, less choroidal heating and more uniform energy distribution with less inner retinal injury.

Methods:

Higher power compared to conventional laser is required for achieving a visible effect on the retina, due to a pulse duration which switches from 100 msec as shortest with conventional to 20 msec as average pulse duration used with Pascal®. One of the major advantages relies on the greater area of retina covered by a single session of treatment. Because of the highly reduced discomfort it is possible to complete up to 1500 spots in the same session with complete satisfaction and cooperation from the patient.

Effectiveness:

Clinical results with Pascal® photocoagulator are comparable with conventional lasers with much better acceptance from the patients. Safety: Due to the reduced thermal diffusion produced by such fast application not only the pain but also the hyaloid contraction is reduced in panphotocoagulation for proliferative retinopathy. Thus the treatment of patients with epiretinal vascularised membranes is unlikely to produce the conversion of tractional to rhegmatogenous detachments.

Take home message:

Pascal® photocoagulator has the features of efficacy, safety and serviceability for replacing the conventional photocoagulation systems in the treatment of Diabetic Retinopathy.