**The use of a semi-occlusive silicon sheet in the prevention of pathological scars**

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**Introduction:**
Pathological scars such as hypertrophic scars or keloids still represent a challenge in plastic surgery, due to the numerous points concern the histology and clinic, which are still debated.

It is well known that, in order to obtain a better cicatrization, the combination of pressure together with the use of silicone offers good results in hypertrophic scar prevention.

**Aim of the study:**
The purpose of our study was to assess the efficacy of a soft, self-adhesive, semi-occlusive silicone sheet (Cica-Care*) in preventing pathological cicatrization in patients with a previous history of hypertrophic scars.

**Materials and method:**
We have evaluated 30 patients, the silicon sheet application starting immediately after surgery and continuing for six months with at least 12 hours per day application (average of 18.5 hours per day). At one, three and six months we performed a measurement of the thickness of the scar using a non contact measurement device, the laser triangulation distance meter, which allowed us to avoid any contact with the elastic surface of the skin.

We used a class II, continuous emitted laser source (light source wavelength 670nm, maximum CW emitted power: 1.9 mW) focused (min/max diameter spot: 140/230 mm) on the target. A position Sensing detector (PSD) was used to collect the light diffused by the target to calculate the distance.

**Results:**
With these measurements we noticed in the patients a positive evolution in terms of thickness of the scars compared to other scars treated previously by using different devices.

**Conclusions:**
The preliminary results obtained in the group of 30 patients are suggestive of a positive management of hypertrophic scars showing an effective action on scar tissue, both as a therapeutic measure on existing scars and as prevention on closed wounds. The study is still in progress and further results on laser-measuring will be reported.

*Cica-Care è un marchio registrato Smith & Nephew*