

## Role of Silicone Gel in Preventing Scars in Case of Scald Burns

Katkam Shashidhar<sup>1</sup>, Ravi Kumar Chittoria<sup>2</sup>, Amrutha J. S.<sup>3</sup>

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### Abstract

Scars are a displeasing side effects of any type of wound. It can vary from a atrophic hypo pigmented linear scar to a hypertrophic scar or a keloid, which can cause trouble to the patient, both symptomatically and aesthetically. There are various modalities present in the arm amentarium of managing scars. All of them modulate the biology of scar in a such a way to make it aesthetically pleasing. One such technique is a silicone gel sheet, which has been widely used in scar management. In this article, we report our unique experience with the use of silicone sheet.

**Keywords:** Silicone gel; Scald; Scar.

## INTRODUCTION

Scarring can have many consequences like, Sunpleasant physical impairments, aesthetic issues, and psychological and social troubles. There is a wide range of scarring which can be either a simple mature linear scar or can be a abnormal raised and hypertrophic scar or a trouble some keloid.<sup>1</sup> Plastic surgeons play a major role in prevention of occurrence of unsightly scars, as

well as management of the scars that have already occurred. Many options, invasive and non invasive are available for the management of scars, the choice of which is based on the surgeon preference and suitability of the technique for a particular scar. Recent guidelines suggest the use of silicone therapy as a non invasive first line prophylactic for the prevention and management of both keloid and hypertrophic scars.<sup>2</sup> In this article we would like to describe our experience with the use of silicone sheet for scar management.

## METHODOLOGY

This study was conducted in a tertiary care center in the department of plastic surgery with departmental committee ethical approval. A 1 year old male child brought by his parents alleged history of accidental scald burn with hot milk. Sustained burn over right upper limb and right side of axilla and chest (Fig. 1).

**Author's Affiliations:** <sup>1</sup>Intern, <sup>2</sup>Professor, <sup>3</sup>Senior Resident, Department of Plastic Surgery, Jawaharlal Institute of Postgraduate Medical Education & Research, Pondicherry 605006, India.

**Corresponding Author: Ravi Kumar Chittoria**, Professor, Department of Plastic Surgery, Jawaharlal Institute of Postgraduate Medical Education & Research, Pondicherry 605006, India.

**Email:** drchittoria@yahoo.com

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Fig. 1: At the time of admission

On examination second degree burns over right side of chest and axilla. He was admitted in Burns ICU managed with antibiotics, IV Fluids, analgesics and regular dressings. Paediatric consultation done and orders followed. Following healing of the wound non-invasive scar management was done. Silicone gel applied twice daily over healed areas (Fig. 2). VSS score before starting scar management 4/13. VSS score improved to 1/13. Compression Garment given.



Fig. 2: Silicone Gel Application

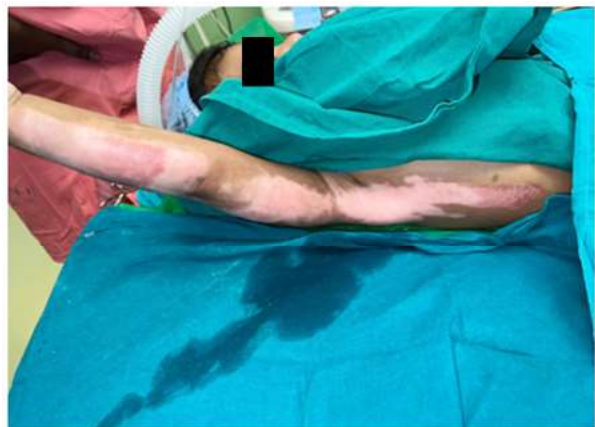


Fig. 3: Normal scar healing

## RESULT

Application of silicone gel over healed areas helps by preventing abnormal scarring and associated post burn contractures.

## DISCUSSION

Introduced in the 1970s, liquid silicone was the first silicone therapy to treat hypertrophic scars and keloids, followed by topical silicone sheets in the early eighties. Clinical application and efficacy of the same appears to be safe and successful. The mechanism of action of the silicone sheet has been hypothesised to be the result if occlusion and hydration rather than the silicone per se.<sup>3</sup> The other mechanism of actions postulated are the silicone sheet acting as a stratum corneum and reducing capillary hyperemia and edema, there by decreasing collagen deposition. Patients are advised to apply the silicone sheet from 12-24 hours a day, and applied for 6 weeks to 6 months.<sup>6</sup>

## CONCLUSION

Application of silicone sheets after proper healing of the wound has shown considerable reduction in the amount of scarring and there by decreasing the incidences of abnormal scarring and associated post burn contractures.

## REFERENCES

1. Sund B [Clinical Report]. In: New developments in wound care, vol. 86. London: PJB Publications CBS; 2000:1e255.
2. Middelkoop E, Monstrey S, Teot L, Vranckx JJ, editors. Scar Management Practical Guidelines. Maca-Cloetens; 2011:1e109
3. Peacock EE, Van Winkle W. Wound Repair, 3rd ed. Philadelphia: Saunders; 1984.
4. Quinn KJ. Silicone gel in scar treatment. *Burns*. 1987;S33-S40.
5. Reish RG, Eriksson E. Scar treatments: preclinical and clinical studies. *J Am Coll Surg*. 2006;206(4):719-30.
6. Li-Tsang CWP, Lau JCM, Choi J. A prospective randomized clinical trial to investigate the effect of silicone gel sheeting (Cica-Care) on post-traumatic hypertrophic scar among the Chinese population. *Burns*. 2006;32(6):678-83.

7. Fulton JE. Silicone gel sheeting for the prevention and management of evolving hypertrophic and keloid scars. *Dermatol Surg.* 2005;21(11):947-51. for hypertrophic scars in the hot climate of Saudi Arabia. *Burns: journal of the International Society for Burn Injuries.* 2001;27:498-501.10.1016/S0305-4179(01)00004-3.
8. Nikkonen M, Pitkanen J, Al-Qattan M. Problems associated with the use of silicone gel sheeting

