

Side effect of silicone sheet in scar management-Our experience

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Abstract

Scars are a displeasing side effects of any type of wound. It can vary from a atrophic hypopigmented 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 armamentarium 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: Scars, Silicone, Wounds.

Introduction

Scarring can have many consequences like, unpleasant 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 troublesome keloid.¹ 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.² In this article we would like to describe our experience with the use of silicone sheet for scar management.

Materials and Methods



Fig. 1: Sheet applied over limb



Fig. 2: Multiple superficial ulcers over the silicone sheet applied area

This study was conducted in the Department of Plastic Surgery, in a tertiary care institute. The Patient was a 40 year old lady who met with a road traffic accident, and had underwent a right sided below knee amputation and left sided extensive debridement with skin grafting over the entire limb. Patient started developing hypertrophic scars over bilateral lower limb. Silicone sheet application was chosen as the mode of scar management in this patient. The patient was advised to apply the silicone sheet (Fig.1). After prolonged application of silicon sheet (for 3 weeks), patient developed superficial ulcers (Fig.2) over the scar and surrounding area. Hence the application of silicone sheet was discontinued and ulcers were managed with collagen dressing and healed well.

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.³ clinical application and efficacy of the same appears to be safe and successful.⁴ 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.⁵ The other mechanism of actions postulated are the silicone sheet acting as a stratum corneum and reducing capillary hyperemia and edema, thereby decreasing collagen deposition.⁶ Patients are advised to apply the silicone sheet from 12-24hours a day, and applied for 6 weeks to 6 months.⁷

Though used frequently the side effect profile of the same has not been researched. Nikkonen et al described in their study that the most common side effect associated with silicone sheet usage was persistent pruritus of the scar followed by skin breakdown under the sheet.⁸ The other documented side effects are skin rash, maceration due to sweating, foul smell, poor durability.

But it was found that temporary interruption of the treatment more frequent washings of the gel sheet, better skin hygiene eliminated the side effects, which was the case in our patient where a brief interruption in the silicone sheet application helped in healing of the superficial ulcers.

Conclusion

Silicone gel sheet is one of the commonest used methods in scar management. But the side effect of the profile is least researched. Though our article describes the side effect, a multicentric randomised controlled trial is required to validate the same.

Conflicts of Interest

All contributing authors declare no conflicts of interest.

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