

# Physiotherapy and rehabilitation of post-surgical skin graft scars in patients with burns. The MSF experience in Gaza Strip, A Retrospective descriptive study, January 2018 - December 2020



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## Burns in Gaza strip

Large number of burn victims seen in the burn centres

- each year its reach 5000 patient,
- children represent 63% under 10 years old represent 2/3of the cohort.
- 66.1% of burns caused by scald, represent 2/3 of the cohort.
- 240 skin grafts surgery provided for burn victims by MSF between 2018-2022

MSFF Gaza statistical reports 2018-2022

## Physiotherapy and Rehabilitation for Burn patients with Scars

The physiotherapist has provided 11330 physio sessions to burn patients in 2020 MSF France Physiotherapy protocol for treating patients with burns focuses on scar tissue massage, stretching techniques, functional rehabilitation and exercises, different, scar tissue hydration using cold creams, and compression therapy with insertion materials

- 74.0% of patients attended 3 physiotherapy sessions per week,
- 86.4% of patients completed their course of treatment
- 178.9 days is the average length of stay in physiotherapy treatment

**Physiotherapy after skin grafts is essential to avoid scar tissue contracture, restore the function and movements, to improve the skin shape and elasticity, and to decrease itching and pain**

MSFF burn Physiotherapy protocol 2019

## Methodology

- **Aim of study** is to describe the cohort and to measure the effectiveness of physiotherapy treatment for patients with post skin graft scars.
- **Study Design:** Retrospective descriptive study.
- **Target population:** Post-surgical skin graft (SSG) scars patients affected by burns enrolled in the MSF-OCP physiotherapy/rehabilitation clinics in Gaza Strip between the period of January 2018 to December 2020.
- **Sample size:** 240 patient files were screened, with skin graft surgery in the period between January 1st, 2018, to December 31st, 2020, who completed the physiotherapy treatment course post skin graft surgery.
- **Outcome measures for the of physiotherapy** treatment Were reviewed are: The JPG reducibility score (for contracture), Functional Activity for Burn score (FAB) (functional independency, The Vancouver Scar Scale (VSS) (for scar), Visual Analogue Scale (VAS) (for pain), Itching score (for itchy)



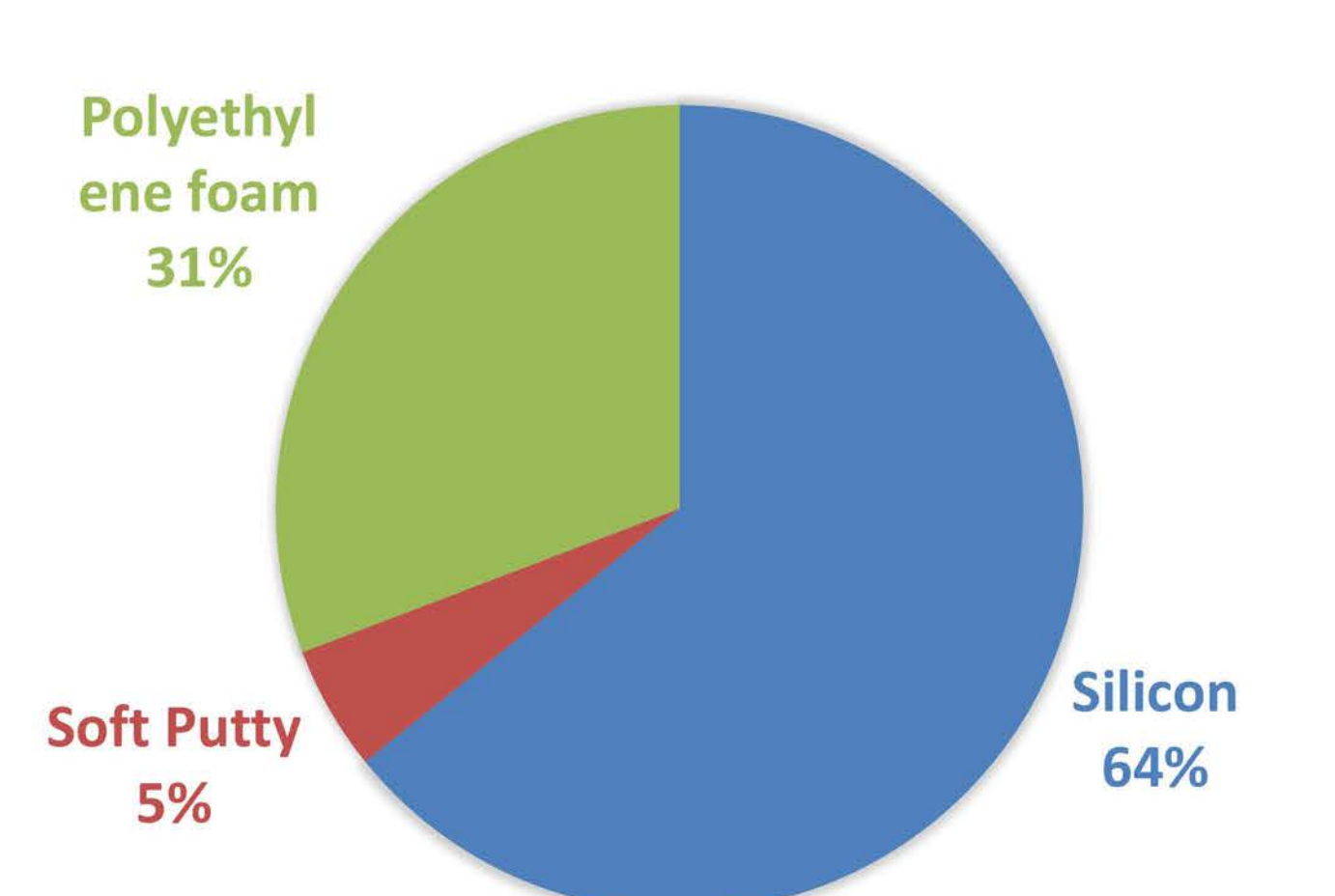
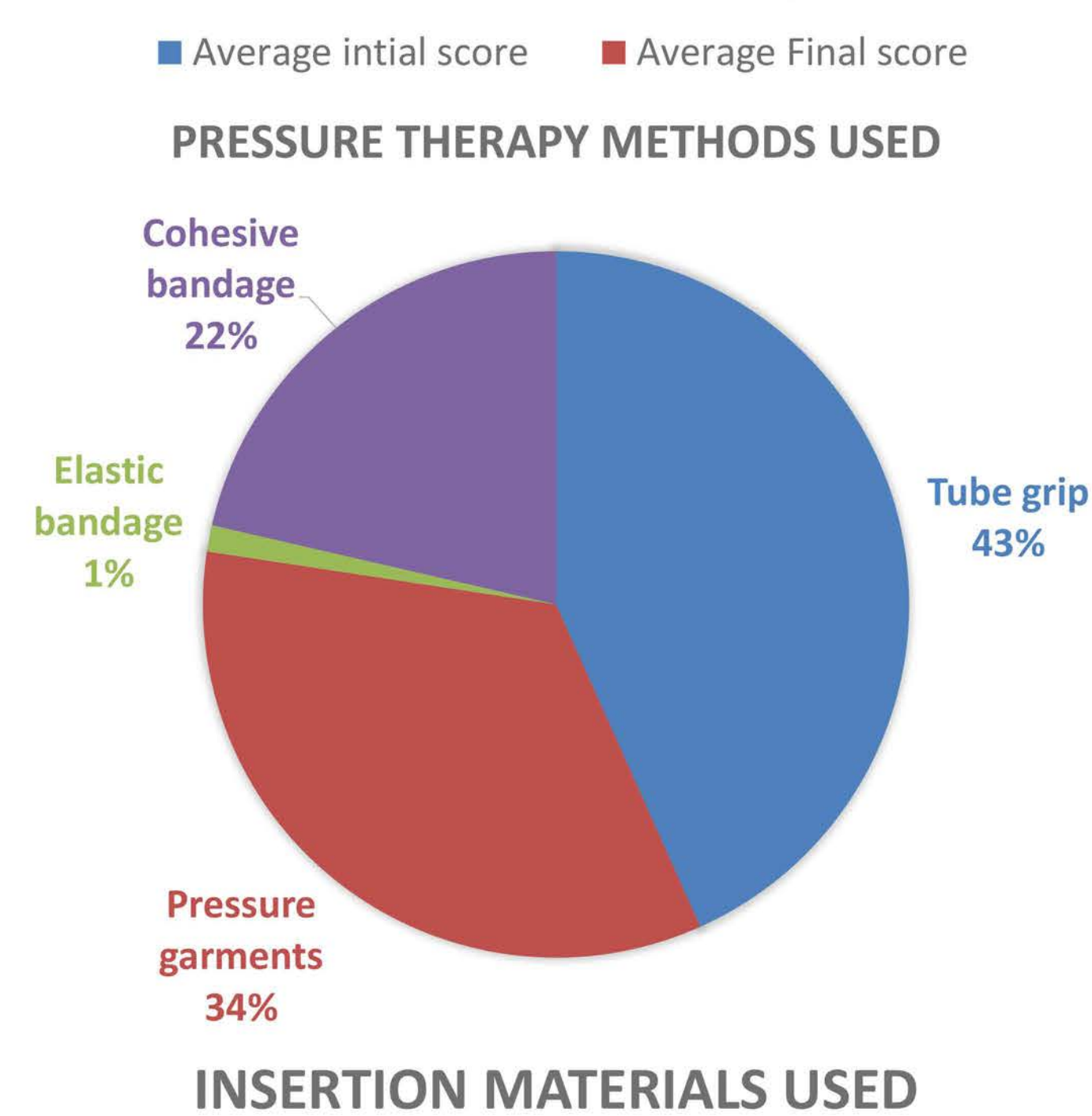
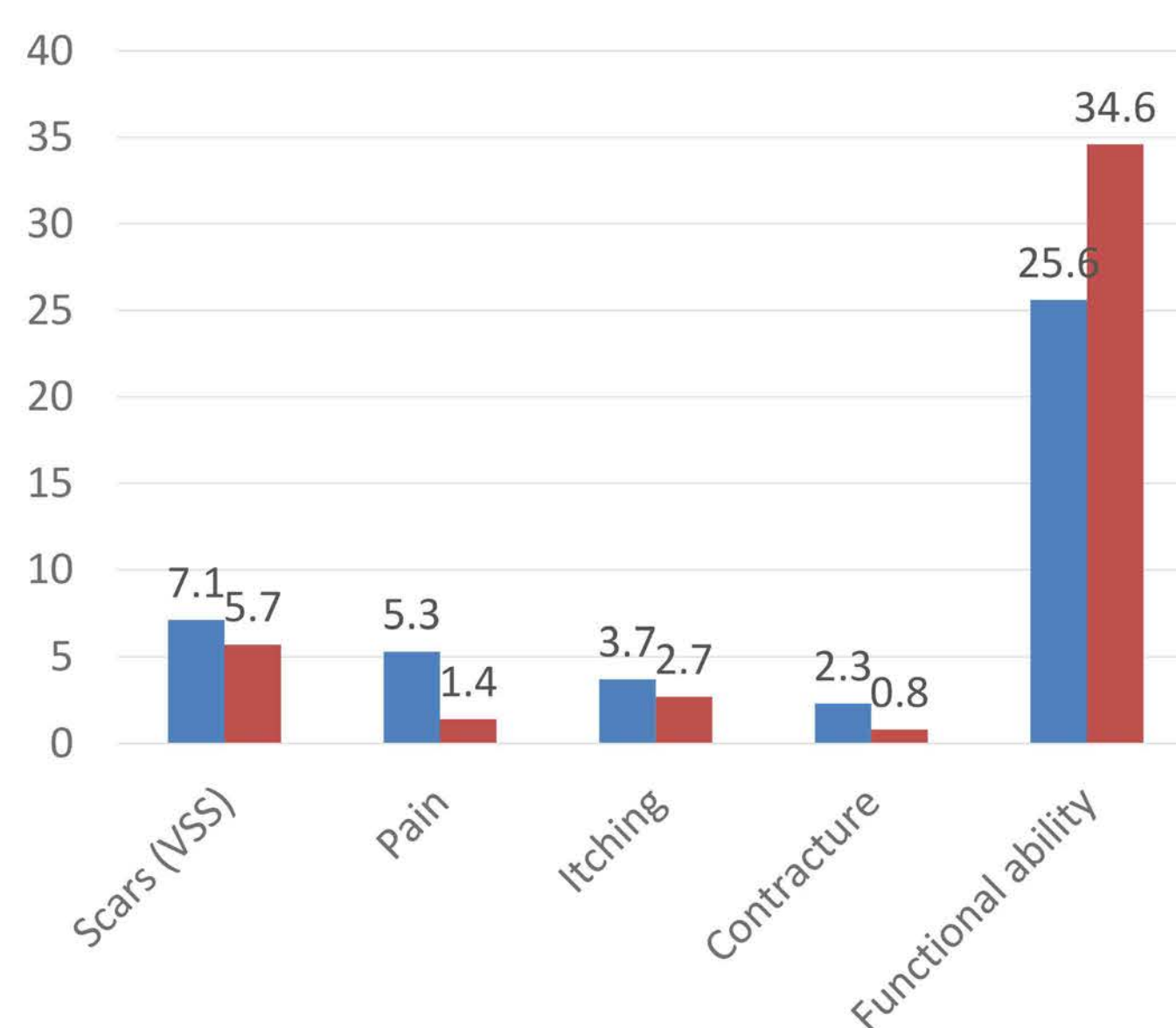
**The study of the cohort shows that the victims of burns in Gaza were mainly children below 18 years old (76.8%), the main cause of burn was scalding due to liquid burns (67.6%)**

## 177 patient files examined in the study

Patients affected by burns with post-surgical skin graft (SSG) scars, received physiotherapy

## Results

Patient situation before and after the treatment



A case with Split thickness skin graft followed with physiotherapy, result after 6 months of treatment



Methods used for pressure therapy and insertion Materials, include pressure garment, Tube grip, cohesive bandage, silicon, and soft putty

Study found that using insert materials under pressure therapy has been effective in helping improve the patient's scars. All types of insert materials were effective to improve pain, scar visibility and itching

## Conclusion

This study highlights the importance of integrating physiotherapy in post-surgery packages of care, physiotherapy can decrease pain, itching, scar pliability, scar pigmentation, scar vascularity, scar height, overall improve patient general functionality and wellbeing and reduced the skin contractures. Further studies using prospective follow-up to better understand the challenges in improving quality of life and outcomes of burnt patients receiving surgery must be considered

**Physiotherapy for patient with post skin graft**

**Is Significantly help to**

**improve the general wellness of the patient**

**Improve patient over all functions**

**its help to decrease the pain**

**itching, scar situation**

**And decrease contractures**

## Acknowledgements

We want to thank all the team that contributed to this study, especially the physiotherapist and occupational therapist from MSF Gaza, who work tirelessly to treat the patients and to make this work possible. specially for Hala, who passed away in March 2022, for her great professionalism and rigor. She will be missed by all of us.