

The Management of Acid Burns in a South African Hospital.

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Introduction

The recently publicised attack of two Aid Workers in Zanzibar has raised the awareness of the use of acid as a method of violent assault. Acid violence is the deliberate use of acid to attack another human being. Corrosive substances such as battery acid, sulphuric acid or nitric acid is used because it is cheap and readily available. Attackers often target the head and face in order to maim, disfigure and blind, and the victims are most frequently women and children.

Acid has a devastating effect on the human body, often permanently blinding the victim and denying them the use of their hands, which makes it difficult to work. Acid Violence rarely kills but causes severe physical, psychological and social scarring, and victims are often left with no legal recourse, limited access to medical or psychological assistance, and without the means to support themselves.

Method

This poster will describe the care of a young male patient who was victim of acid violence in South Africa. He received a severe acid burn to the face and neck, resulting in extensive tissue damage, which had a devastating impact on his quality of life.

While describing the care of the wound, the importance of involving the patient in the choice of dressing product, and the impact of the injury can have on his quality of life.

Result

The patient was a young unemployed male, who was a victim of mistake in identity. He was attacked by three men who poured a chemical solution over his head, face and neck, and they also tried to force the fluid into his mouth. He initially experienced excruciating pain and loss of sight as his eyelids became closed, but was able to escape to a nearby garage where he had worked, where water was used in an attempt to flush away the acid and reduce the pain.

He was admitted to the Nelson Mandela Academic Hospital in Mthatha, Eastern Cape, South Africa where he was assessed. Initially excision and grafting was not indicated because of the continuing injury status due to an acid burn. Radical debridement was not initiated because of a desire to preserve as many of the facial features as possible. He was treated with a number of dressing regimes, to prepare the wound bed prior to skin grafting. At this point the patient was experiencing a range of emotions, which impacted on his quality of life.

- He suffered excruciating pain from the wound.
- He was angry and wanted to avenge himself.
- He had feelings of intense hopelessness that his badly burned face would leave him disfigured. Although was not aware of the extent of his injury, he had some limited vision from the corner of one eye could see the responses of others who he observed to have difficulty looking at him, or whose facial expressions were horrified at his injury.
- He was concerned that he would lose his sight.
- He was ashamed of the odour which resulted from the wound. The dressings which were initially used were an enzymatic debriding agent with a non-adherent pad, which was held in place with a bandage. The dressings quickly became wet and soggy, and despite frequent dressing changes started to smell.



Photograph 2 18/01/2013

The Clinicians involved in the care of this patient, decided to use Drawtex® Hydroconductive Dressing with Levafiber™ Technology to manage the exudate, using a wound contact layer over the burns. Although the patient was reluctant to try a new product, he eventually gave consent with encouragement from his medical and nursing team. After a few days of using Drawtex, the odour disappeared, the exudate levels reduced

and a small area of healthy tissue was observed through the necrosis. A mirror was used to show this to the patient who was encouraged to see some progress. After this regular pictures were taken to demonstrate to the patient that his wounds were improving, at which point he became more positive about his future.

Photographs 3, 4, 5 and 6 show the wounds after 7 days treatment with the Drawtex regime. The exudate levels have decreased and the granulation tissue looks healthier.



Photographs 3, 4, 5 and 6

Unfortunately the dressing regime was changed again, resulting in a deterioration of the wound. It again became wet, malodorous and signs of infection developed. The patient again became withdrawn and extremely anxious, and pleaded for the Drawtex to be used again. (Photographs 7, 8 and 9).



Photographs 7, 8 and 9 05/02/2013

A regime of Drawtex used over a wound contact layer, with Irujol applied to necrotic tissue was started, after which the exudate was reduced and the malodour eliminated. Once the wound started

to improve again, the patient started to see that skin grafting was possible and that his quality of life could improve. (Photographs 10, 11 and 12).

The wound bed was prepared sufficiently to enable a series of skin grafts to be undertaken on the 8th March (Photograph 16 and 17).

The physical treatment on the patient was successful, and he was discharged from hospital after 96 days of treatment.



Photograph 13, 14 and 15 18/01/2013

And the patient can smile again!

Discussion

This case study highlights the patient's journey through a period of time where

his quality of life was incredibly poor. He has given permission to allow his photograph to be used to show the devastating effect of the injury and the outcome of the management. While it focuses on the importance of using the most appropriate dressings, the care, support and encouragement given to him on a daily basis by the clinical team who treated him should not be undervalued. A large part of this was encouraging the patient to be involved in his wound management, and allowing him to choose products which were acceptable and comfortable but also by reducing distressing symptoms increased his confidence and self worth.

Wound bed preparation is an important process in the management of wounds which require skin grafting to enable them to heal. In this case study Drawtex was used within a programme of care successfully, reducing the distressing symptoms, increasing his confidence caused by the excess exudate and improving the quality of tissue both in the wound and the periwound skin.

Conclusion.

This case study demonstrates the devastating injury caused by acid violence, on a young man already with limited means and opportunities. Unfortunately this type of injury is not uncommon in some counties where there is limited access to specialist medical care.

The incidence of acid attacks are thought to be rising with around 1500 incidents occurring globally each year – although many are not reported.¹

Acid violence is a means of violent attack in many countries. Organisations such as the Acid Survivors Foundation (ASF) and the Acid Survivors Trust International (ASTI) are campaigning to raise the profile of acid violence. Their work is recognized by international bodies such as Amnesty International, World Health Organisation, Buckingham Palace and Americans for UNFPA (United Nations population Fund). They also provide a network of clinicians to provide specialist care in countries such as Bangladesh, Cambodia, Nepal, Pakistan and Uganda where this type of attack is most prevalent.

ASF runs a 20 – bed licensed hospital supported by charitable donations which treats around 700 acid burn victims annually (including survivors from previous years). Many of the victims work within the Trust being active within the governing body of the organisation, or as "survivor" ambassadors to campaign as a collective voice for justice, the protection of rights and to raise awareness of the problem. These "survivor ambassadors" also travel to remote rural areas to offer psychological support for others who are victims of acid attack.

ASTI providing vital financial and technical support while building local medical capacity through teams of expert volunteers, which include plastic surgeons, burns and physical therapists, nurses and counsellors, who train local medical and psycho-social practitioners to provide victims with the specialist care they require.

References

1. Reuters. Disfigured victim's plea to die exposes India's acid violence (2012) (<http://in.reuters.com/article/2012/07/27/india-acid-attacks-id>)

Websites

- <http://www.acidsurvivors.org/>
- <http://www.acidviolence.org>