**Imperial Journal of Interdisciplinary Research (IJIR)**
**Vol-3, Issue-9, 2017**
**ISSN: 2454-1362,** http://www.onlinejournal.in

# Burn Depth Assessment is Notoriously Subjective, but Full Thickness Burns Are Generally Self-Evident. Under What Circumstances Might You Choose Not To Operate On A Full Thickness Burn And Why?

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***Abstract :*** *'Burn depth assessment is notoriously subjective, but full thickness burns are generally self-evident' and in many circumstances require surgical intervention, either immediately or soon after initial management.*

*Full thickness burns are classically categorised as burns with depth to the hypodermis, characteristically charred, insensate, with eschar formation.*

*The key indications for surgical intervention of burns include:*

- *The surgery is an immediate life or limb saving procedure.*
- *It will reduce the risk of infection or worsening of infection*
- *It will allow viable tissue to be preserved*
- *It will enable function to be maintained*
- *It will reduce scar formation*

*However, this paper will look through circumstances might not allow to operate on a full thickness burn and why? During clinical practice*

**Analysis**

Burn depth assessment is notoriously subjective, but full thickness burns are generally self-evident' and in many circumstances require surgical intervention, either immediately or soon after initial management.

Full thickness burns are classically categorised as burns with depth to the hypodermis, characteristically charred, insensate, with eschar formation.

The key indications for surgical intervention of burns include:

- The surgery is an immediate life or limb saving procedure.
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However, in certain circumstances the responsible clinical team may choose not to operate on a full thickness burn. There are a number of reasons for this and in some cases this may be a clear cut decision, however often it is a decision that requires a holistic and multidisciplinary approach assessing a number of factors.

**Burn Factors:**

Although in full thickness injuries, the tissue loses its regenerative elements (and therefore healing only occurs fro the edges, therefore causing contractures) and therefore commonly requires excision and grafting, in injuries that are full thickness but less than 1cm in diameter and in an area of the body where function is not compromised. In this type of full thickness injury the clinical team may deem surgery unnecessary.

Furthermore, in circumstances where by surgical intervention would pose a greater threat to life it would not be an option. Burns with uncertainty of depth are also initially managed conservatively unless they pose an immediate risk, and can be reviewed following 48hours of dressings. Escharotomy can be crucial if tissue viability is compromised for example vascular supply is compromised or respiration is compromised due to circumferential burns to the torso. In addition, a patient with a gangrenous limb may require amputation as a life-saving procedure. Cases where escharotomy would be contraindicated include patients with gangrene of the extremity with a circumferential eschar. This is likely to occur in patient's management non-surgically for a prolonged duration, and the risks and potential complications in this circumstance would potentially outweigh the benefits.

**Patient factors:**

A major consideration in any intervention, whether it is medical or surgical is whether the patient

a) Understands the risks and benefits and

consents to the intervention

b) Will be able to manage with their treatment and comply with their treatment

In order to address these considerations, it is standard practice to assess the patient's capacity and determine whether they are able to understand, weigh the risks and benefits and communicate their decision before consenting the patient for a procedure. One of the reason's a surgeon may not operate on a patient with a full thickness burn is because the patient with full capacity does not consent to the treatment, or the patient themselves does not have capacity to make that decision and the persons acting on behalf of the patient (this may be their clinical team), do not feel surgery is in the best interest of the patient.

When considering whether the patient will be able to manage and comply with their treatment (for example, attending appointments or providing home visit access for dressing changes and wound care or ensuring good personal care/hygiene pre- and post-operatively, or attending physiotherapy), a number of healthcare professionals would be involved in addressing this. This may involve physiotherapists, who may feel a patient is unable to comply to their physical therapy for optimal recovery, or a dietician, who may deem the patient as having a poor nutritional status which may affect the outcomes of surgery. Furthermore, occupational therapists may feel that the patient is unable to comply due to issues such as self-neglect, alcohol or drug misuse. These factors may have a substantial impact on whether a surgery is beneficial or in fact, may lead to worsening of quality of life and outcome for the patient.

**Hospital Factors:**

Another important factor to be considered with respect to performing surgery in full thickness burns is whether the centre has the appropriate resources for adequate surgical management pre-, intra- and post-operatively. This encompasses specialist surgeons, availability of surgeons in other specialities if required (eg general surgeons, ENT surgeons, orthopaedic surgeons), specialist nurses trained in tissue viability and burns wound care, intensive care unit, physiotherapists, dieticians, occupational therapists, district nurses for wound care in the community. This may not be a significant hindering factor to surgical intervention in the UK as there are a number specialist burns centres and rehabilitation facilities in the UK. However, this is a very real and difficult situation for surgeons and clinical teams in other parts of the world where specialist burns care may not be available.

**Findings**

No research found