

# *Introduction*

Post burn neck contractures still represent a surgical challenge due to their exposed location; and early operative treatment is necessary for both functional as well as aesthetic reasons (*Kuran et al., 1999*).

The neck is a region with multi-directional activity, and postoperative scar contractures tend to form there easily. In addition, the aesthetic outcome is particularly important in these regions (*Jian et al., 2007*).

Post burn neck contracture and hypertrophic scarring cause functional limitation and aesthetic disfigurement (*Motamed et al., 2003*). The psychological problems stem from the fact that neck is so visible. Countermeasures to ameliorate these disorders consist of early psychological intervention, which should begin at the time of patient's admission and continue until the patient returns to society together with carefully planned treatment of the burn wounds, and skillful reconstructive surgery to correct the resultant disfigurements to attain a reasonably satisfactory cosmetic effect (*She-kou and China, 1998*). And physical problem as the traction forces caused by burn scar contracture may pull and cause insufficient neck extension, incomplete oral occlusion tracheal alteration affecting respiration resulting in difficult intubation that can be life threatening and can result in multiple serious complications and sequelae (*Agarwal, 2004*).

Proper planning and tissue selection is essential to minimize donor site morbidity while optimizing outcomes (*Feng et al., 2006*).

The classification of post burn neck contractures is useful in describing severity and guiding reconstructive options but further study is required before it is used in the choice of airway management for anesthesia. *Ifeanichukwu et al., 2005* described neck contracture according to the percentage of the neck involved. Others by joining various anatomical areas. So it is classified into mild moderate severe neck contractures by the involvement of the scar above hyoid and below hyoid or combination of both (*William and Jean, 2006*).

Several neck contracture prevention methods can be employed during the treatment of an acutely burned patient and some of the methods listed will tend to prevent burn neck contractures or reduce the severity of a subsequent contracture which include:-

Early grafting, Physical therapy, Use of neck collar, Short mattress use, Television placement and Possible use of a mandibular wire. (*David, 2003*)

The definitive surgical treatment of burn neck contractures is ideally done at the proper time and responding to the correct desires and reasoning of the patient. (*David, 2003*) several well known procedures are possible: split or full thickness skin grafts, local flaps, free skin flaps, tissue expanders (*Adent et al., 1998*)

The current trends in free flap surgery are aimed at preservation of the major vessels achieving a thin flap and decreasing the donor site morbidity. Many surgeons attempt to achieve these goals by using pre fabricated flaps or perforator free flap. This is especially useful in patients with major burn when flap donor sites are limited and large thin flaps are required for cervicofacial reconstruction. (*Woo and Seul, 2001*)

There are several special procedures in carrying out successful early and later postoperative care. Including stent management. *(David,2003)*

Physiotherapy is essential in order to curtail undesirable consequences associated with burn injuries. Rehabilitation therapists may accomplish their treatment goals of positioning splinting, mobility and scar management by creating simple, inexpensive devices made of readily available materials. It takes flexibility adjustability, innovation and a little imagination to design and fabricate devices that can be equally as effective as the expensive devices are hard to obtain *(Serghiou and Huang, 2006)*.