

SPECTRUM OF FACIAL BURN INJURIES AND THEIR DIFFERENT MODES OF TREATMENT*Satishchandra B. K¹, Basavaraju K. M²*¹Assistant Professor, Department of Surgery, K. S. Hegde Medical Academy, Deralakatte, Mangalore.²Assistant Professor, Department of Surgery, Yenepoya Medical College.**ABSTRACT****INTRODUCTION**

A major public health problem in India is burns injuries. It is prevalent especially in low and middle income countries, where over 95% of all burn deaths occur. Fire related burns alone account for over 0.3 million deaths per year. But Death is not the only consequence. There are around 80% of the fire victims who become disfigured and permanently disabled. For some this means living with the stigma and rejection that all too often comes with disability and disfigurement.

KEYWORDS

Burn Injuries, Stigma, Epidemiological.

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INTRODUCTION: A major public health problem in India is burns injuries. It is prevalent especially in low and middle income countries where over 95% of all burn deaths occur. Fire related burns alone account for over 0.3 million deaths per year. But Death is not the only consequence, there are around 80% of the fire victims who become disfigured and permanently disabled. For some this means living with the stigma and rejection that all too often comes with disability and disfigurement.¹ India is moving forward industrially and technologically but this development creates awareness about the lack of safety measures in all walks of life. The causes for burn injury differ in various communities and understanding this is necessary before preventive action can be planned and implemented.

Face being the special area in the human body, which has all the major sense organs of the body functions as a window to the whole outer world. The face is richly vascular and the very thinly supported by fat except for the cheeks. It is the part which is a universally accepted as a divine part of the body.

So if anything that harms the face will not just alter the beauty but also the sense organs will be damaged which may cause permanent damage to the personality. Epidemiological studies are a prerequisite for effective burn prevention programs, as each population seems to have its own epidemiological characteristics. In the present study, majority of the patients have been housewives in the age group of 21-40 years. One third injuries have occurred between 4 pm to 8 pm and were similar to a study conducted in India.² This is the period when evening meals are cooked and lighting equipment are used. It was noted that 65% of females were wearing synthetic clothes at the time of burn and was identical to other studies.^{3,4} Indian women wear

loose flowing synthetic garments, which can catch fire easily and cause extensive burn injury. Alleged accidental burns contributed to 81.58% of the injuries. This finding indicates the caution needed when using equipment causing burns. Flame was the most common agent in 92.5% of the females and similar results have been seen in various studies.^{5,6,7} Cooking appliance was the most common source of injury in females and this finding indicates that women should be very careful all the time. In this study, only 31.58% victims were doused with water. This finding suggests the necessity of education with regard to emergency steps at the time of an incident. The stated cause for alleged accidental burn injury in 67.74% females was ignition of their clothing and 35.48% males had burn injury while attempting to save other victims and are consistent with other studies.^{2,7} This indicates the need for women at home to be extra careful with their clothes properly tied and the males to know the way to rescue other victims from fire. In this study, 40% of females had total burn surface area >61% and indicates the gravity of the situation. The case fatality rate was 31.58%. More than 50% of the males recovered whereas nearly 50% of the females died as a result of the burn injury. This is similar to other studies and indicates the need for aggressive measures to decrease the mortality due to burns.

So, the study was done to understand spectrum of facial burn injuries and their different modes of treatment.

AIMS AND OBJECTIVES:

1. To find out the different causes of burns of face.
2. To find out the different degrees of burns.
3. And the treatment approach of the injury.
4. Thirty burn patients were studied who had facial burns. Most of them were domestic cooking related burns. Thirteen people had secondary burns.

MATERIALS AND METHODS:

- Thirty burn patients were studied who had facial burns.
- They were asked the cause of the injury.

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- They were divided according to degree of burns. The extent was noted and the treatment plans for each were designed.
- The study was conducted in K. S. Hegde Medical Academy, Deralakatte, Mangalore.

RESULTS:

Cause of Burns	Number
Electrical	8
Cooking	17
Hot water	4
Acid	1

Table 1: Causes of Burns

Degree of Burns	Number
First	8
Second	13
Third	9

Table 2: Degree of Burns

Extent of Burns	Number
Face	14
Face and scalp	11
Face, scalp and neck	5

Table 3: Extent of Burns

Treatment:



Image 1: Hair transplantation on burnt scalp



Image 2: Skin grafting on face

- Microsurgery is sometimes done to correct the deformities of lips.
- Mini flaps will be constructed if there is a gross deformity.
- Mobilization of the tissues will be done if the deformity is large and extensive rearrangement is needed.
- Sometimes neck has to be superficially dissected to remove the strictures or to correct torticollis.

Treatment	Percentage
Skin graft	13
Microsurgery	9
Mini Flaps	5
Mobilization	3

Table 4: Treatment of the Injury

Condition	Treatment	Percentage
1st and second degree burns on face.	Skin graft	43.33%
Second and third degree burns with ablations.	Microsurgery	30%
Third degree burns with major loss of soft tissues.	Mini Flaps	16.6%
Third degree burns with major loss of soft tissues and associated bone fractures.	Mobilization	10%

Table 5

DISCUSSION: Skin grafts. This is often used for burn patients; skin is removed from one area of the body and transplanted to another. There are two types of skin graft: split-thickness grafts in which just a few layers of outer skin are transplanted and full-thickness grafts, which involve all of the dermis. There is usually permanent scarring that is noticeable.

During a skin graft, a special skin-cutting instrument known as a derma tone removes the skin from an area (the donor site) usually hidden by clothing such as the buttocks or inner thigh. Once removed, the graft is placed on the area in need of covering and held in place by a dressing and a few stitches. The donor site is also covered with a dressing to prevent infection from occurring. Recovery time from a split-thickness skin graft is generally fairly rapid, often less than three weeks. For full-thickness skin graft patients the recovery time is a few weeks longer. Aside from burn patients, skin grafts can also be used during breast or nose reconstruction.

Microsurgery. Have you lost a finger, toe, ear or even a lip? Microsurgery may allow for those to be re-attached. Simply stated, it is a procedure in which the surgeon uses a microscope for surgical assistance in reconstructive procedures. By using a microscope, the surgeon can actually sew tiny blood vessels or nerves, allowing him or her to repair damaged nerves and arteries. This may also be a method to relieve facial paralysis or reconstruct breasts. Microsurgery is frequently used with other surgical procedures such as the free flap procedure.

Free flap procedure. A free flap procedure is often performed during breast reconstruction or following surgery to remove head or neck cancer. During the procedure, muscle, skin or bone is transferred along with the original blood supply from one area of the body (donor site) to the surgical site in order to reconstruct the area. The procedure often involves the use of microsurgery. Healing of the surgical site can be slow and require frequent wound care. Total recovery may take six to eight weeks or longer.

Tissue expansion. Tissue expansion is a medical procedure that enables your body to "grow" extra skin for use in reconstructive procedures. This is accomplished by inserting an instrument known as a "balloon expander" under the skin near the area in need of repair. Overtime, this balloon will be gradually filled with saline solution (salt water), slowly causing the skin to stretch and grow, much the same way a woman's skin stretches during pregnancy.

Once enough extra skin has been grown, it is then used to correct or reconstruct a damaged body part. This procedure is especially common for breast reconstruction.

Tissue expansion has many advantages in that the skin colour and texture are a near perfect match for the area in which it is needed and there is little scarring since there is no removal of skin from one area to another. The major drawback to tissue expansion is the length of the procedure, which can be as long as four months. During this period, as the balloon expander grows the bulge under the skin grows with it. This bulge may be desirable for a breast reconstruction patient; however, for patients undergoing this procedure for scalp repair, the bulge may be uncomfortably noticeable.

CONCLUSION: In India with the ever growing population the accidents are more bound to happen. The challenges are there to be tackled. Newer ways are being developed to overcome the problems.

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