UNIT 4 TRAUMA CARE AND BURN RESPONSE

Structure

4.0 INTRODUCTION

Burn is the most distressing condition for patients. Burn injuries cause physical and psychological impact on patients. The burn problem affects all ages ranging from infants to old age people and is a problem both in developing and developed countries. Burns are also a common consequence of disasters and accidents. Burns have an immediate as well as a long term impact on the victim. There is need for a multidisciplinary approach while dealing with a burn patient. The burn treatment is not straight forward because there are different guidelines at national and international level for treatment of the burn injuries patients. Burn cases are associated with high morbidity and mortality in the first 24 hours. The rate of mortality due to burn injuries is very high in developing world as compared to the developed world.

In this unit you will learn the common causes of burns in the various occupations. You need to be aware of the immediate actions that need to be taken when there is a burn case or cases depending upon the cause of the burn. You will learn how to impart first aid in the case of burns and also the follow up actions that are required in the individual cases and community at large depending upon the cause of the burns

4.1 OBJECTIVES

After going through this unit you will be able to

- identify the potential areas where burn disasters could occur in the industrial settings;
- describe the steps of first aid during burns by different causes;
- enumerate the indications for transfer of a burn case to hospital; and
- discuss the long term measures in case of a burns disaster.

4.2 BURNS AS AN OCCUPATIONAL HAZARD IN THE INDUSTRIES

Industrial accidents are a common cause of burns of various types, it might be due to flames, due to fire, or release of high pressure steam. It can also be due to electrical failure leading to short circuit and fire or due to spillage / inhalation of a chemical that is corrosive in nature. To deal with such accidents and reduce its impacts , proper management of burn by its identification and first aid as well as referral care is the key.

4.3 TYPE OF BURN ON THE BASIS OF CAUSE AND SEVERITY

On the basis of cause and severity burn can be further classified into following types:

1. Classification on the basis of Causes

Based on the cause of bur, they can be classified into the following four types:

- Thermal burns are caused by heat (both direct and indirect). This can be caused by a flame, a hot object, steam, or the fireball from an atomic explosion.
- Electrical burns square measure caused by associate electrical current passing through the body, like from coming in contact with a “live” electrical wire.
- Chemical burns square measure caused by liquid or dry chemicals like ammonia, sodium hydroxide, quick-lime, or white phosphorus (WP).
- Radiant energy burns will be caused by lasers, electrical attachment arcs, ultraviolet radiation, and microwaves. In such cases the first danger is to the eyes.

2. Classification on the basis of Severity

On the basis of severity, we can classify the burns into three degrees.

- First degree burns — The skin is red and painful sort of a sunburn, however blisters aren’t gift?
- Second degree burns — The skin is red and painful; blisters area unit gift.

- Third degree burns — The skin layers area unit destroyed and underlying fat, muscles, and/or bone can also be broken. The burn space might not be painful as a result of the nerves that are destroyed, however the encompassing second and degree burn areas could also be painful. Second and first degree burn areas may be painful.

Check Your Progress 1

Note: a) Write your answer in about 50 words.
b) Check your progress with possible answers given at the end of the unit.

1. How do you classify burns on the basis of causes?

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2. How do you classify burns on the basis of severity?

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4.4 ASSESSMENT OF BURN AREA

The extent of a burn is normally expressed as the percentage of the body area that is concerned in a damage. In Vast burns, the entire area affected person (which includes the lower back) should be examined. Take into account that burns patients, in particular children, can also get a cold quick so patients must be warmed as necessary.

4.4.1 Wallace's Rule of Nines

This method is quick to apply and can be used to estimate the location of medium to massive burns in adults however it is much less appropriate for children

Arm — 9%

Head — 9%

Neck — 1%

Leg — 18%

Posterior trunk – 18%

Anterior trunk – 18%

4.4.2 Assessment of Burn Type and Depth

Classification of depth of burns. Epidemis is the uppermost layer of the skin while dermis is the lower layers.

This assessment is based on the burn type and depth of burn

Depth of burn affected	Layers of skin findings	Examination
Superficial epidermal	The epidermis is affected, but the dermis is intact	Skin is red and painful, but not blistered.
Partial thickness — superficial dermal	The epidermis and upper layers of dermis are involved	The skin is pale pink and painful with blistering.
Partial thickness — deep dermal	The epidermis, upper and deeper layers of dermis are involved	The skin appears dry or moist, blotchy and red, and may be painful or painless. There may be blisters.
Full thickness	The burn extends through all the layers of skin to subcutaneous tissues	The skin is dry and white, brown, or black in colour, with no blisters. It may be described as leathery or waxy. It is painless.

Check Your Progress 2

Note: a) Write your answer in about 50 words.

b) Check your progress with possible answers given at the end of the unit.

1. Fill in the banks

   a. Wallence's Rules of Nine can be used to estimate _____. It is less appropriate for _____.

   b. The burn which extend through all the layers of skin to subcutaneous tissue is a ____ depth of burn.

4.5 FIRST AID FOR BURNS

The goals of first aid should be to stop the burning procedure, cool the burn, offer ache relief, and cowl the burn.Let us learn more about the different steps in details.

1. **Prevent the burning manner**— the heat source should be eliminated. Flames must be doused with water or smothered with a blanket or by rolling the sufferer at the ground. Rescuers should take care to avoid burn damage to themselves. Apparel can preserve heat, even in a scald burn, and should be eliminated as soon as feasible. Adherent material, which include nylon garb, must be left on. Tar burns need to be cooled with water, but the tar itself should no longer be removed. The case of electrical burns, the victim needs to be disconnected from the supply of strength before first resource is attempted.

2. **Cooling the burn**—energetic cooling gets rid of warmness and forestalls progression of the burn. That is powerful if accomplished within 20 minutes

of the injury. Immersion or irrigation with running tap water (15°c) ought to be continued for up to twenty minutes. This also gets rid of noxious chemicals and reduces pain, and can lessen oedema by using stabilising mast cells and histamine release.

Iced water should not be used as severe vasoconstriction can purpose burn development. cooling big regions of skin can result in hypothermia, specially in kids. chemical burns ought to be irrigated with copious quantities of water.

Benefits of cooling burn injuries with water

- Stops burning process
- Minimises swelling
- Reduces pain
- Cleanses wound

3. **Analgesia**—exposed nerve endings will cause pain. Cooling and truly overlaying the exposed burn will reduce the pain. Pain killers are often required to reduce pain. Opioids maybe required to start with to managepain, but once first aid measures have been effective, non-steroidal anti-inflammatory tablets along with ibuprofen or diclofenac taken orally will suffice.

4. **Masking the burn**—dressings must cover the burn region and keep the patient warm. Polyvinyl chloride movie (cling film) is a perfect first useful resource cover. The commercially available roll is largely sterile so long as the primary few centimetres are discarded. This dressing is pliable, non-adherent, and impermeable, acts as a barrier, and is obvious for inspection.

A blanket placed over acme will maintain the affect individual's hotness. In case of burn, sterile clean cotton can be used, while a clean plastic bag should use for protection of hand burn in order to limit mobility of hand. In burning situation, need to avoid from the use of moist dressings. It should not be use of any additional lotion and cream which is not applicable for subsequent degree of assessment of the burn. Always use cooling gels along with burn guard on the advice of paramedics. Those are useful in cooling the burn and relieving ache in the initial levels.

4.5.1 Burns by Fire

If a fatality is being burned, you have to first dispose of the source of the burn to be able to restraint both the casualty and yourself. Once the sudden hazard has been removed or controlled, test the fatality for breathing, manipulate any main bleeding, and take measures to manage or save you shock.

Placed out the flames

- If the fatality's apparel is on hearth, cover the sufferer with a massive piece of non-synthetic fabric (which include a wool or cotton blanket) and move the sufferer at the ground till the flames are restricted.
- If non-synthetic fabric can't be received speedy, get the casualty to the ground and have him roll at the flame till it goes out.

– do no longer use artificial substances which include nylon and rayon due to the fact they'll soften and cause extra damage.

4.5.2 First Aid Depending Upon the Cause of Burn

Burns from the electric current

If the casualty is lying on an electrical wire, assume the electrical wire is carrying electrical current and can be a danger to you as well as to the casualty.

– Avoid to touch the electrical wire with your hands.

– break out to the touch with victim in the meantime the electric can bypass from the wire and through the casualty to you.

Stop the Current

- If the *current* can be turned off quickly, such as flicking a switch, turn it off before removing the fatality from the wire.
  - If you think that enteric current is passing through wire after turned off, take precaution before dealing
- If it is faster to detach victim from the wire, take away the sufferer from the wire and provide aid first.

Separate Casualty and Wire

- Two-rescuers: Slide a dry rope, dry clothing, or other material which will not freely conduct electricity under the casualty's body and lift the casualty from the wire.
- Take a second person, use a wooden limb or other long, nonconducting object to push the wire away from the casualty.
- One rescuer: Covering dry rope or similar material around the victim limb or limbs and strain the casualty away from the wire.

Check for Breathing

- Check the victim's breathing after you have detached him from the current. Manage mouth-to-mouth resuscitation if needed.

4.5.3 Burns from Chemicals

The burns could be from liquid chemicals or dry chemicals

Liquid Chemicals

- Discharge as much water as possible over the burned area.
- If a adequate amount of water is not available, use any fire-resistant fluid to flush the area.

Dry Chemicals

- Practice a clean, dry cloth to brush off loose particles on the skin and flush the skin with as much water or nonflammable liquid as possible.
  - Avoid from flush of dry chemicals unless water or other nonflammable fluid is available in large amounts. When combined with water, the chemical may convert into an active, burning substance.

4.5.4 Area affected

The first aid will also depend upon the area affected. Let us see how to respond depending upon the area affected

1. Chemicals in the Eye

- Clean eye with water as quickly as possible.
- Position the victim's head with the eye to be flushed lower than the other eye. This preserves chemicals from the eye being flushed from flowing into the other eye.
- Hold the victim's eyelid open.
- Flush water lightly into the eye. Discharge from the inner edge of the eye (end closest to the nose) to the outer edge.
- Carry on flushing the eye with water for at least 20 minutes.

2. Burns of the eye

- Laser burns cause an instant decrease in the ability to see.
- Keep away victim from additional exposure to the radiant energy source and out of bright sunlight.
- The victim's eyes do not need to be bandaged, but he may feel more comfortable if a dark cloth or loose bandage is placed over his eyes if he does not need to walk or continue to do his mission. If a dressing is applied, use it only in the eye.
- Remove the victim when the situation allows.

4.5.5 Skin burns (What to Do?)

- At the time of the burn, spread over abundant amounts of water to the burn site.

Expose Burned Area(s)

- Cut and slightly lift away any clothing covering the burned area.
- Do not remove clothing over the burned area.
- Don't remove any piece of clothing that sticks to the burned area in place.
  - If you are in a chemical environment, do not expose the wound. Put on dressing over the casualty's clothing.

Remove Jewellary

- Eliminate any Jewellary from the burned limb and put it in the victim's pocket. The Jewellary which is not removed now may have to be cut off later if the limb swells sufficiently.

Dress and Bandage Burned Area(s):

Bandage are used to burn dressing for covering the cream or ointment placed on the burn area:

- Use a field dressing over the burn wound and secure the dressing using the attached tails.

- In case of electrical burn, use burn dressing at both the entry and the exit point of burn wound.
- In case of deep burn, always use the cleanest available material to cover the burned area.
- Avoid to clean the burned area before applying the dressing.
- Escape apply any grease, ointments, or medications to the burned area.
- Avoid to break any blisters that have formed.

Check for Shock

- Check it, if fluid lost occur due to cause of shock.
- Take suitable preventive measure to control shock.
- If the victim has second and third degree burns on 20 percent or more of his body, fluids should be administered intravenously.
- If the victim is not in shock and is not nauseated, give him small quantities of cool water to drink.

Get Medical Help

- Provide medical treatment or evacuate the victim, if practical.
- In case of electrical burns most of the damage happen in the interior part of the body make more serious for victim, provide immediate mediacl help to sufferer.

Check Your Progress 3

Note: a) Write your answer in about 50 words.

b) Check your progress with possible answers given at the end of the unit.

1. What are the steps of first aid for burns?

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2. What are the steps for first aid in burns from electric current?

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4.6 INDICATIONS FOR REFERRAL TO A BURNS UNIT

All complex injuries should be referred. The complexity of burn is depends on various factor such as

- If the victim has extremes of age—under 5 or over 60 years
- Position of injury-Face, hands, or perineum, Feet (dermal or full thickness

loss),Any flexure, particularly the neck or Axilla, Circumferential dermal or full thickness burn of limb, torso, or neck

- In case of Inhalational injury-any substantial injury, excluding pure carbon monoxide poisoning
- Mechanism of injury such as -Chemical injury > 5% of total body surface area; Exposure to ionising radiation; High pressure steam injury; High tension electrical injury; Hydrofluoric acid burn >1% of total body surface area; Suspicion of non-accidental injury
- Large size (dermal or full thickness loss);Paediatric (< 16 years old) > 5% of total body surface area; Adult (_ 16 years) > 10% of total body surface area
- Coexisting conditions-Any serious medical conditions (cardiac dysfunction, immunosuppression, pregnancy)
- Any associated injuries (fractures, head injuries, crush injuries)

Management of Minor Burns

The reason of damage and intensity and quantity of burn should be assessed in the identical manner as for greater most important burns and recorded. Further, associated infection or accidents must be considered (including small burns because of fits, faints, or falls). Burns suitable for outpatient control are typically small and superficial and not affecting crucial regions.

The subsequent steps needs to be done.

Cleaning the burn

It is crucial to realise that a new burn is basically sterile, and every attempt need to be made to hold it so. The burn wound have to be thoroughly cleaned with soap and water or mild antibacterial wash which includes dilute chlorohexidine. Smaller blisters ought to be left intact.

Dressings

Many special dressings are in use, with little or no facts to support any person method. We favour protecting the smooth burn with a simple gauze dressing impregnated with paraffin Avoid using topical lotions as these will interfere with next assessment of the burn. Apply a gauze pad over the dressing, followed by numerous layers of absorbent cotton wool.

Dressing changes

The exercise of next dressing adjustments is numerous. Ideally the dressing need to be checked at 24 hours. The burn wound itself should be reassessed at forty eight hours and the dressings changed, as they are probably to be soaked via. At this stage the depth of burn should be obvious, and topical agents along with silver sulfadizine can be used.

Minor burns suitable for outpatient management-Dressing changes for burns

- Use aseptic technique
- First change after 48 hours, and every 3-5 days thereafter
- Criteria for early dressing change:

- Excessive “strike through” of fluid from wound
- Smelly wound
- Contaminated or soiled dressings
- Slipped dressings
- Signs of infection (such as fever)

Follow up

- Burns that fail to heal within three weeks must be referred to a plastic surgical operation unit for evaluate. Healed burns may be sensitive and feature dry scaly pores and skin, which might also broaden pigmental changes.
- Moisturiser cream have to be recommended for every day.
- Healed regions should be blanketed from the sun.
- Rash is a common trouble.
- Physiotherapy—patients with minor burns of limbs mayalso require want physiotherapy. it is critical to identify those sufferers early and start remedy.
- Support and reassurance—sufferers with burn injuries often fear approximately disfigurement and ugliness, at the least in the quick term, and parents of burnt kids frequently have emotions of guilt.

Psychosocial issues and support

Psychological distress occurs in maximum survivors of severe burn injuries. Even though the hospital may be confined in imparting expert guidance due to the fast time the patient stays in the emergency, the caregiver need to stay aware about the affected person’s psychosocial reputation and offer aid as indicated. While each man or woman reviews psychological misery otherwise, human beings with burn injuries may additionally document:

- feeling unhappy, demanding or irritable,
- feeling helpless,
- feeling hopeless, feeling on my own,
- being concerned approximately capacity changes in life-style, look, physical limitations, and so forth., and
- feeling sad or irritated approximately the loss of belongings, loved ones or pets.

With the expanded survival of patients with massive burns comes a brand new cognizance at the psychological challenges and restoration that such sufferers should face. Most burn centres appoint social employees, vocational counsellors, and psychologists as a part of the multidisciplinary burn team.

Physiological recovery of burn

Physiological recovery of burnpatients is seen as a continual process divided into threestages

- resuscitative or critical,

- acute, and
- long term rehabilitation.

The psychological needs of burn patients differ ateach stage.

Resuscitative or critical stage

The mental traits of this stage include stressors of the intensive care environment, uncertainty approximately final results, and a struggle for survival. In depth care surroundings can be each overstimulating and understimulating with the monotony of lying in a health centre bed for weeks. Cognitive adjustments along with severe drowsiness, confusion, and disorientation are common throughout this period. Extra severe cognitive adjustments including delirium and short psychotic reactions also arise, usually as a result of infections, alcohol withdrawal, metabolic headaches, or excessive doses of medication. Patients may also be intubated, which substantially limits direct verbal exchange.

Psychological characteristics of critical stageof recovery from a burn

- Overstimulation
- Understimulation
- Delirium, confusion, and disorientation
- Impaired communication
- Sleep disturbance
- Pain

Burns in the developing world and burn disasters

Most of the developing countries have an excessive prevalence of burn injuries, growing a formidable public health hassle. High populace density, illiteracy, and poverty are the main demographic elements related to a excessive chance of burn injury. The high occurrence makes burns an endemic fitness hazard. Social, economic, and cultural elements interact to complicate the management, reporting, and prevention of burns.

Burn management problems in most of developing countries

- High incidence of burns
- Lack of prevention programmes
- Inadequate burn care facilities
- Lack of resources
- Lack of trained staff
- Poor infrastructure and coordination
- Social problems

Burn disasters/Industrial Accident with Mass burn injuries

A disaster is a scenario that is unpredictable, huge, and poses a right away risk to public health. A burn catastrophe is “an occasion resulting in mass burn casualties

and excessive loss of human lives and cloth from a acknowledged thermal agent." disasters normally exceed the resources of nearby healthcare facilities.Catastrophe management entails coordinating the activities of diverse fitness disciplines to save you disasters, provide an instantaneous response to a disaster, and assist in rehabilitation of victims.

Managing a disaster

People present at the scene of the disaster, may be survivors or passers-by and provide immediate care. The community is the first responders, there is need to provide guidance by trained healthcare workers who arrive at the site. On site has more importance for bur disaster, therefore disaster management personal should include first aid, patient triage, and ambulance staging with a basic aim of maximal use of resources.

Managing Burns at Mass Scale: BURNS TRIAGE

Triage is the cornerstone of powerful burn catastrophe control and is executed at the disaster site by staff with knowledge of burn treatment. Triage takes into attention the full range of patients, bed availability, and transportation potential. Triage should be prognostic, and patients must be classified primarily based on age, extent of burns, and placement of burns and presence of inhalational injury.

- **Group I—**Minor burns (< 10% of total surface area in children, < 20% in adults) to non-critical areas

  Provide medical treatment to victim such as - Outpatient care, dressing, tetanus prophylaxis

- **Group II**—Minor burns to critical sites (face, hands, genitalia)

  Provide medical treatment to victim such as —Short hospital stay, special wound care or operation

- **Group III**—Major Burns (20-60%)

  Provide medical treatment to victim such as —Admission to burn unit, intravenous resuscitation

- **Group IV**—Extensive burns (> 60%)

  Provide medical treatment to victim such as —Lower priority for transfer

- **Group V**—Minor burns with inhalational injury or associated injury

  Provide medical treatment to victim such as —Oxygen, intubation, transfer to intensive care unit.

The patients in groups III and V are evacuated first, followed by group IV. Group II cases are evacuated at the end. Group I cases are either discharged after first aid or asked tomake their own way to the nearest primary care centre.The success ofsuch a plan lies in accurate triage at every level, so that allcentres are used optimally and best possible treatment isdelivered to all according to the severity of injury, with minimum delay.

Characteristics of a burn disaster

- Large number of patients with extensive burn injuries

- A high incidence of serious associated injuries
- Site of the disaster is not always accessible
- Immediate care and assistance may not be adequate
- Response time may be prolonged
- Local infrastructure

Strategies for effective burn care

The method to burn control needs to be significantly specific from that during different international locations. The prevention method for effective burn care should be based on behavioural and environmental changes, which can be effortlessly followed into way of life. The prevention care programmes need to be done with endurance, persistence, and precision, targeting high-risk group.

Strategies for burn management indeveloping countries

- Effective prevention programmes
- Burns as national health agenda
- Central registry of burns
- Create a professional burn group
- Adequate safety legislation
- Induct district hospitals and primary health centres
- Encourage patient management at home
- Cost effective treatment procedures
- Develop regional centres of excellence

The prevention strategy additionally depends on the population, policy on burns prevention and availability sufficient funds for main to proper coordination of district, local and tertiary care centres. There's need for compulsory reporting of all burn admissions to a crucial registry for the use of it in development of techniques and prevention programmes. There need to be good enough provision via regulation to set manufacturing standards for heating and electric system, fireplace safety standards for excessive upward push buildings, and processes for storage and transportation of risky materials, explosive chemical substances, and firecrackers. A national body of burn experts should be constituted to educate all healthcare personnel involved in burn care.

Providing treatment

To provide foremost burn care to a large population with confined assets, it's vital to reinforce the present infrastructure. A few regional burn centres must be involved to provide tertiary control and education to burn care workforce. Standard surgeons operating in district hospitals should form the nucleus of the burn care service and determine referral methods.

4.7 BURN PREVENTION AND FIRE SAFETY

About 90% of burn injuries are preventable. This has been brought about through many attempts to decrease their occurrence. These attempts fall into two essential categories—**education and legislation**

Education is an "active" process that requires a change in an individual's behaviour.

Legislation is "passive" and is independent of a person's actions. Both have advantages and disadvantages.

Education—the most successful campaigns have targeted specific burn aetiologies or populations. The main problem with educational prevention is that it relies on changing the way individuals behave. However, a successful educational campaign has an instantaneous and widespread impact.

Legislation—Legislation (such as the compulsory fitting of sprinklers in commercial buildings) has led to substantial decreases in burn injury. The main problem with legislation is that it takes time to pass and to have an effect. Compliance must also be obtained and maintained. However, as it does not rely on a change in individuals' actions, legislation can be effective. Effective prevention requires both passive and active elements. The basis for all prevention is good epidemiologicaldata to reveal specific causes of burns and at risk populations, both of which can be targeted.

Check Your Progress 4

Note: a) Write your answer in about 50 words.
b) Check your progress with possible answers given at the end of the unit.

1. What are the psychological characteristic of the critical stage of recovery from a burn case?

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2. What are characteristics of a burn disaster?

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4.8 KEY WORDS

Hypothermia : Body temperature below the average normal temperature of the body.

Analgesic : Medicine for reducing pain

Autograft : A thin layer of skin taken from an unburned area of the patient's body and placed on the burned area. The layer of skin adheres to and covers the burned area.

Circumferential : When a burn injury completely encircles the torso, leg, or arm.

Contractures : Tightening or pulling of skin in a band-like fashion that decreases movement.

Debridement : Removal of dead tissue from the burned area.

Donor site : An unburned area of the body from which the autograft or skin is taken to place on the burn wound.

EKG : An electrocardiogram, a measurement of the heartbeat.

Eschar : A layer of dead, burned tissue.

Escharotomy : The process of cutting through burned skin to allow for normal circulation.

Extubation : The process of removing a patient from ventilator assistance in breathing.

Homograft : A thin layer of skin taken from a cadaver and placed over a burn wound after debridement to act as an artificial skin until an autograft can be placed.

Hydrotherapy : A daily bathing used to clean the wound and soften eschar in order to aid in the healing process.

Intravenous (IV) : A very small plastic catheter (needle) placed into a vein to allow more rapid administration of medication and to give fluids needed in large amounts.

Intubation : A process of placing a patient on a ventilator.

Nasogastric tube (NG) : A small tube passed into the nose and down into the stomach. This tube may be used to remove stomach contents or to give feedings to provide adequate nutrition not taken by mouth.

Narcotics : Drugs that relieve pain.

NPO : Latin abbreviation for “nothing by mouth.” The patient is not to eat or drink.

Oximeter : A monitoring device that measures oxygen in the body. The device may be placed on the earlobe, finger, or toe.

Range of motion : Exercises performed either actively or passively to increase joint mobility, preserve function, and increase strength.

Skin grafting : A surgical procedure where a thin layer of skin (autograft) is taken from an unburned part of the body and placed on a burn wound.

Splint : A device used to maintain a body part in a fixed position.

Xenograft : A layer of pig skin placed over a burn wound after debridement to act as an artificial skin until an autograft can be placed.

4.9 LET US SUM UP

- Burn can be of various types and can be due to various factors.
- Remember to rescue a person only when you are safe.
- Usually with Burns: Fire , Smoke, Electricity and Chemical Factors are associated.
- First Aid plays a vital role in treatment and management of Burn.
- Whenever in doubt always refer a casualty to a nearest medical centre for expert opinion and advanced care.
- There are few stigmas associated with burns, management and societal views .Make sure you address them as well while attending a burn victim.

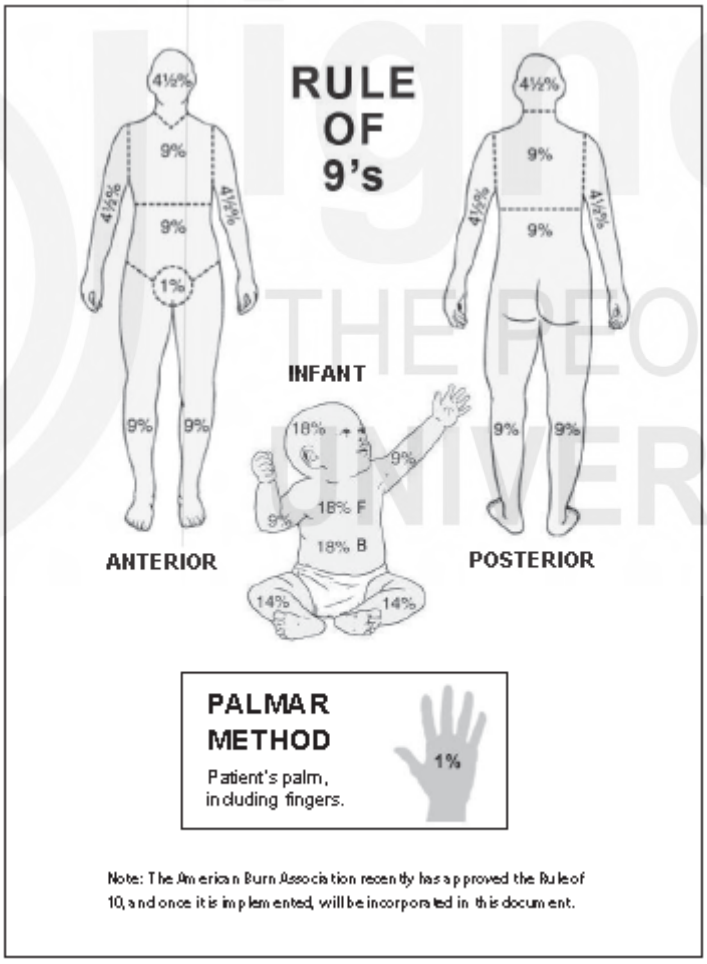

Fig.4.1 : Rule of 9 To assess the burn percentage in human body.

4.10 ANSWERS TO CHECK YOUR PROGRESS

Your answer should include the following points:

Check Your Progress 1

1. a. Thermal burns
   b. Electric burns
   c. Chemical burns
   d. Radiant energy burns
2. a. First degree burns
   b. Second degree burns
   c. Third degree burns

Check Your Progress 2

1. a. Location of medium to massive burns, Children
   b. full thickness

Check Your Progress 3

1. a. Prevent the burning manner
   b. Cool the burn
   c. Give pain killer
   d. Mask the burn
2. a. Stop the current
   b. Separate casualty and fire
   c. Check for breathing

Check Your Progress 4

1. Psychological characteristics of critical stage of recovery from a burn
   - Overstimulation
   - Understimulation
   - Delirium, confusion, and disorientation
   - Impaired communication
   - Sleep disturbance
   - Pain
2. Characteristics of a burn disaster
   - Large number of patients with extensive burn injuries
   - A high incidence of serious associated injuries

- Site of the disaster is not always accessible
- Immediate care and assistance may not be adequate
- Response time may be prolonged
- Local infrastructure

4.11 REFERENCES AND SUGGESTED FURTHER READINGS

1. ABC of burns Introduction Shehan Hettiaratchy peter Dzzieulski
2. Burn Practices guideline
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4. https://uihc.org/health-topics/burn-glossary