Q.No.6

Burn

Classify burn according to depth:-

Two main

Partial thickness burn — Full thickness

- superficial
- deep

Partial (superficial):-

epidermis and dermis upto its papillary layers is involved

C/F:- erythma, blister, loss of epidermis

dermis is pink and moist

This is painful and heal without scaring within 2 weeks

Rx non surgical Rx

Partial (Deep):-

epidermis and dermis up to its reticular layer is involve

C/F epidermis is lost

sensation are reduced

pt not distinguish b/w sharp and blunt pressure

Rx:- Take 3 or more weeks to heals without surgry

Hypertrophic scarring

Full thickness:-

whole dermis destory in the burn

hard, leathery feel

Thrombosed vessels seen

surgical intervention Require for healing by

skin grafting

Flaps

Asscessment of %age of burn:-

Role of nine use :-	back	front	
head neck	4½	4½	
Right arm	4½	4½	
Left arm	4½	4½	
chest	9	9	
abdomin	9	9	
up back			
Lower back			
Rt thigh,	4½	4½	9
Left thigh	4½	4½	9
Rt Leg	4½	4½	9
Left Leg	4½	4½	9
Penial area			1%
	Total	100%	

for child

head neck	18
chest + abdomen	18 + 18
Both arm	18
Both leg	14 + 14

Assess depth of burn :-

depend on time and temp

Scalds :- from liquid below boiling (Partial thick)

Fat burn :- deep dermal

Flame burn :- mixed burn

alkali :- full thickness burn

electrical :- full thickness

Acid :-

Weak Conc. Superficial burn

Strong Conc. deep dermal

Parkland Formula :-

In 24 hr =

4ml X pt body weight X % age of burn

50 year burn of face, chest front upper, both limb arm.

4.5 9/2 upper 36

4 4.5

36

9

49.5

36 36

4.5 9

4.5

% age 49.5

= 4ml X 50 X 49.5

= 9000 ml

First 8hr 4500 ml fluid 16 hr 4500 ml fluid use

assess size of burn

By Rule of nine

By Lund and Browder chart

A for head 1/2

B thigh 1 1/2

C = legs + lower 1 1/2

	0	1	5	10	15
A = 1/2 head	9 1/2	8 1/2	6 1/2	5 1/2	3 1/2
B = 1/2 of 1 thigh	2 3/4	3 1/4	4	4 1/2	4 3/4
C = 1/2 of 1 lower leg	2 1/2	2 1/2	2 1/4	3	3 1/4

whole head, neck, ant chest

9 9

18

W = 60kg

= 4 ml x 60 x 18

420 ml

Complication of burn :-

acute :- ARDS.

Loss of fluid → hypovolemic shock

aute Renal failure → myoglobinuria

delayed

Malabsorption

Ulcer of stomach

Compartment syndrom

Infection

↓ immunity

Bacteremia

Septicemia

Late :-

Scar

Ulcer

Respiratory defect :- burn around face and neck

being Traped in burning room

change in voice

stridor

28 year old man in emergency Flame burn and pt close in room, He is drowsy, diffiault in breath HR - 95/min, BP 100/65 mmHg, RR 35/min wheeze all over chest?

diagnosis

Initial step..

Complication

inhalation burn

Initial managment

Admit

check airway

Breathing and ventilation

circulatory suport by fluid

analgesics

physiotherapy

Nebulization

Managment

physiotherapy

Management

humiclified O2

monitor Resp Rate

ABGs

Ventilation

At in ICU

Complication

pnumonia

aspiration

Pleural effusion

Management

Pre hospital care :-

Stop burning process

Check for other Injuries

- Airway
- Breathing
- Circulation
- Disability
- Exposure

Cool the burned wound (analgesia)

cool 10 min to ↓ pain

at 15°C and Hypothermia (avoid)

Give oxygen

Elevation of burns limb may reduce swelling, pain

Sitting bumPL → improve airway

In hospital :-

admit the patient

check airway. → intubation, endotracheal Tube

breathing and ventilation → To check Resp effort ↓ Rising pulse rate confusion ↓ O2 saturation ← Nebulizer warm O2

circulatory support by fluid → fluid Resuscitation by formula

analgesia → Paracetamol, NSAID, (IV Morphine) → Large

Energy balance and nutrition → NG Tube food provide

Infection Prophylaxis

Rx of wound antibacterial

dressing e:- silver nitrate, serum nitrate

nanocrystalline silver

silver sulfadiazine

curling ulcer + gastric erosion H2 blocker PPI

Escharotomy / Tracheostomy

Nursing Care

Physiotherapy

Psychological support

Initial Rx full thickness burn (Fluid)

Sever acidosis correct → IV bicarbonates

IV fluid To maintain urine output.

ECG

Diuretics

correct electrolyte imbalance → Ringer Lactate

volume of fluid 24 hr adult

4ml x Pt weight x % age of burn

child :-

4ml x weight x % age burned x maintence fluid

M.F = 100ml/kg for 10kg for 24 hr

50ml/kg for 10 kg

20ml/kg every kg above 20kg

albumin sol inward oncotic pressure

~~without protein~~ not maintain edema

~~Muir and Barclay frm~~

~~0.5 x % age burn x weight = one portion~~

Period 4/4/4. 8/8. 12hr

one portion given each period

70 year old weight 60kg.

Facial burn. Post chest burn.

both upper limb burn

4.5 + 9 + 18

= 31.5

= 4 × 60 × 31.5

= 7560 ml

1st 8hr 3780 ml fluid

after 16hr 3780ml fluid

Assess of circumferential :-

full thickness circumferential

(Limb) cause escher formation

compartment syndrom

(ches) breathing difficulties

need escharotomy

Escharotomy :-

→ Escher is coagulated necrosis skin

→ result of deep burn, eschar is rigid and

→ cannot expand

→ Fluid and protein extravasate from tissue beneath

this eschar.

⇒ If full circumferential burn → eschar act as

Tornaquet and can hamper

the vascular supply of this limb

leading to ischemia and muscle

necrosis

⇒ Surgical incision over escher and superficial fascia to relieve Presure on underlying structure

upper limb	midaxial ant to elbow
hand	midline in digits
Lower limb	midaxial post to ankle
chest	Lateral to nipple
	below clavicle
	across chest at level of xiphysternum

mid x 60 kg man flam burn - ant chest
whole head neck
% age size of burn

9 + 9
= 18% burn

60 kg. thickness burn
head - neck whole
~~ant ches~~
~~9 + 9~~
~~= 18%~~
~~mid x 60 kg x 18~~
=

4.1
150 kg face upper chest front
both lour leg
4.5 + 18 + 9 + 9
~~total x 50 x 3 + 5 + 9~~
~~mid x 50 x 40.5~~

4.5
18
9
9
36

60 x (4.5 * 9 + 18)
mid
mid x 60 x (9 x 9 + 18)