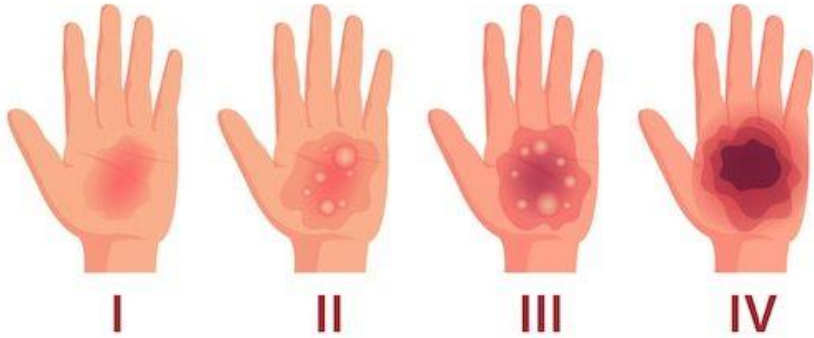


DEGREE OF SKIN BURNS



✓ DO

✗ DON'T



Cool the burn



Apply aloe vera



Don't use oils



Don't use egg



Bandage the burn



Take a pain reliever



Don't pop blisters



Don't use ice

BURNS



• QUESTION

Yaqeen 2025

فكر بون ل

This is a picture for a patient who was involved in an electrical burn with a high voltage,:

- 1.what causes the urine color in this case
- 2.what measures should be taken to prevent renal impairment in this patient?



ANSWER

1. Color is a due to rhabdomyolysis. (Myoglobin in urine)
1. Fluid intake and alkalization of urine



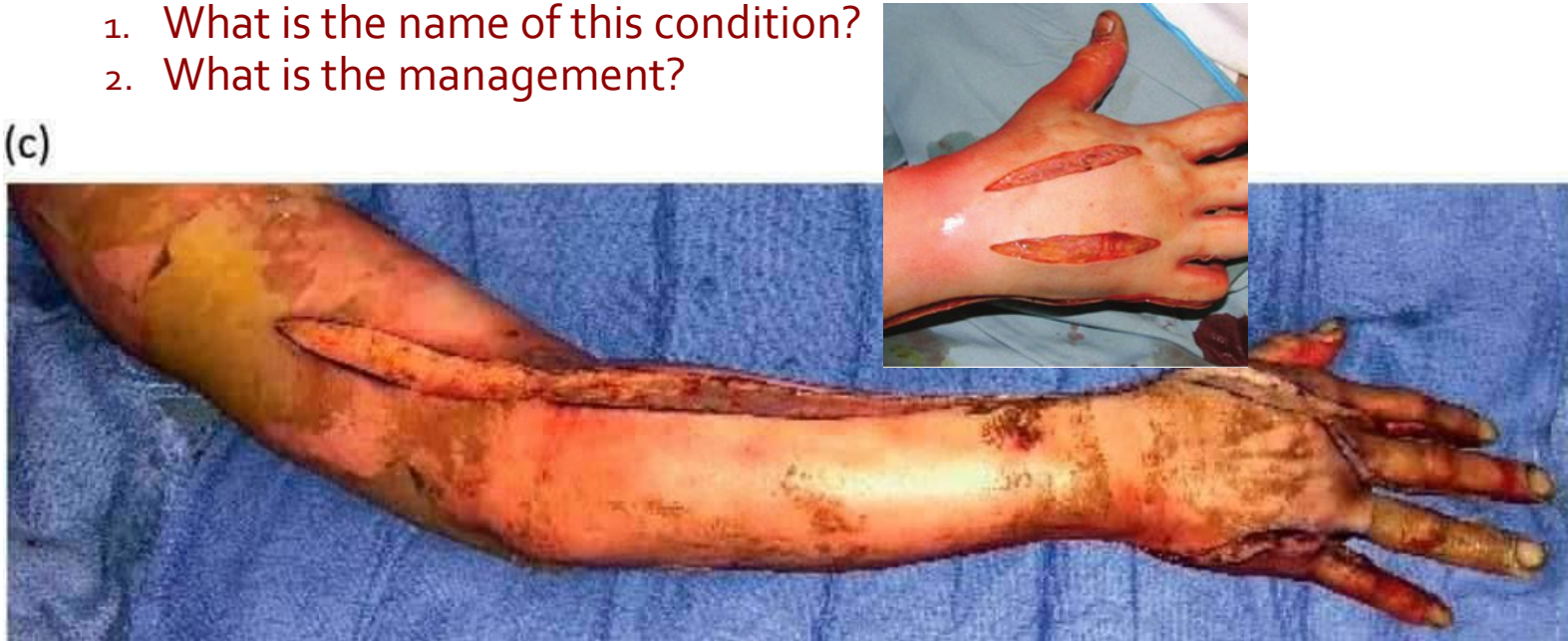
• QUESTION

Yaqeen 2025

Case of circumstantial burn with futures of neurovascular compromise :

1. What is the name of this condition?
2. What is the management?

(c)



ANSWER

1. Distal neurovascular impairment.
2. Escharotomy

A) Circumferential, full-thickness burns to the extremities are at risk for what complication?

Distal neurovascular impairment

B) How is it treated?

Escharotomy: full-thickness longitudinal incision through the eschar with scalpel or electrocautery



• QUESTION

Wateen 2023

9 year old child presented with 2nd degree burn all over his upper limb bilaterally.

A. What is the estimated percent of burn this child has?

B. Mention one major complication this patient is likely to have?

(No picture found)



• ANSWER

28% ← lower limb لو سفكنا

not calculated ← 1st degree لو سفكنا

✓ A. 18 %

✓ B. Contracture



. QUESTION

SOUL 2021

one of the criteria of urine admission

Baby presented with burn to the ER, the surface area was described (I think both ¹⁸ arms with lower back and neck)

A) What is the ¹⁸ management:

B) What is the percentage:



• ANSWER

ABDEF +

A. Admit and pain management + Ab + if there is blisters,
remove it

B. 30% (any number from 25-30 is accepted)

26% ↙



• QUESTION

عکس پر پڑھو

SOUL 2021

1. What is the Diagnosis?

2. Question about the rule of 9 for upper limb?

9% in both adults & children



• ANSWER

1.Type 2 burn



عکور یونہ

2019 – Before

• QUESTION

Q1: What is the degree of burn in this image?

Q2: What is the name of the scar? *eschar*

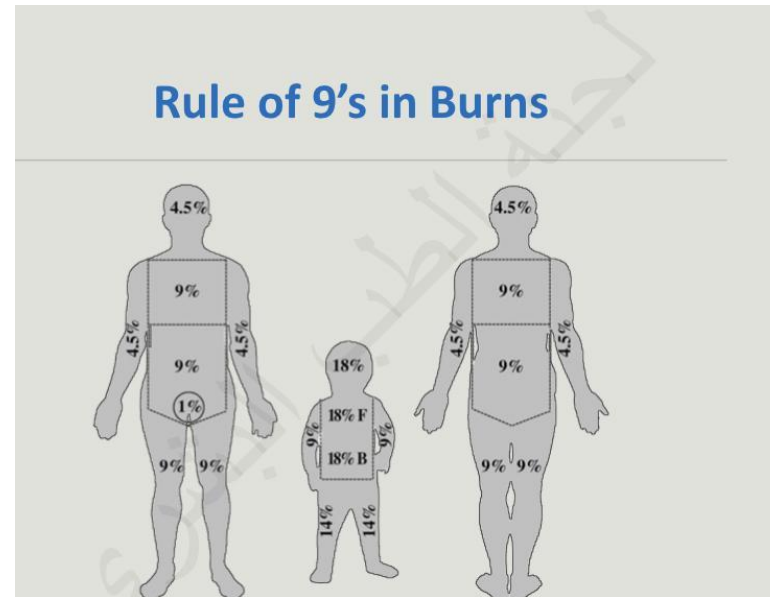
Q3: if the burn was circumferential and the patient weight was 100 kg, calculate:

1. TBSA% 2. Fluid needed in the 1st 8 hours



• ANSWER

1. 3rd Degree
2. Escharotomy
- 3.



Burns

A photograph of a large fire at night. The fire is intense, with bright orange and yellow flames and thick black smoke rising from a structure. In the foreground, the silhouettes of four firefighters wearing helmets and gear are visible, looking towards the fire. The word "Burns" is overlaid in the center in a large, white, bold font with a black outline.

1st, 2nd, and 3rd Degree Burns





1st degree burn

- ①- Pain and erythema.
- ②- Limited to the dermis.
- ③- No contracture.
 - (1-6) days , heals by regeneration.
 - Applies only to thermal burns.



2nd degree burn

- ④- Necrosis of the epidermis and varying depth of the dermis (superficial/ intermediate/ deep).
- ⑤- Pain, erythema, blisters, blanching, burned area is wet with exudate.
 - Applies only to thermal burns.



3rd degree burn

- Full thickness.
- **Eschar** (dead tissue, insensitive, lethargy, inelastic, hard).
- Applies only to thermal burns.



- **Post burn contracture.**
- a complication of 3rd degree burns.
- they should have put skin graft for the patient to prevent this complication.

Fasciotomy Jari

Table 1. Classification of Burns by Depth

Burn Thickness	Deepest Skin Structure Involved	Appearance	Pain	Prognosis (Without Surgical Intervention)
Superficial (first-degree)	Epidermis	Dry, blanching erythema	Painful	Heals without scarring, 5-10 days
Superficial partial-thickness (second-degree)	Upper dermis	Blisters; wet, blanching erythema	Painful	Heals without scarring, < 3 weeks
Deep partial-thickness (second-degree)	Lower dermis	Yellow or white, dry, nonblanching	Decreased sensation	Heals in 3-8 weeks; likely to scar if healing > 3 weeks
Full-thickness (third-degree)	Subcutaneous structures	White or black/brown, nonblanching	Decreased sensation	Heals by contracture > 8 weeks; will scar

First degree

Partial thickness burns.

- ✦ Characterized by erythema (localized redness).
- ✦ Appear sunburn-like.
- ✦ Are not included when calculating burn size.
- ✦ Usually heal by themselves.

Second degree

Partial thickness burns.

- ✦ Part of skin has been damaged or destroyed.
- ✦ Have blisters containing clear fluid.
- ✦ Pink underlying tissue.
- ✦ Often heal by themselves.

Third degree

Full thickness burns.

- ✦ Full skin has been destroyed.
- ✦ Deep red tissue underlying blister.
- ✦ Presence of bloody blister fluid.
- ✦ Muscle and bone may be destroyed.
- ✦ Require professional treatment.

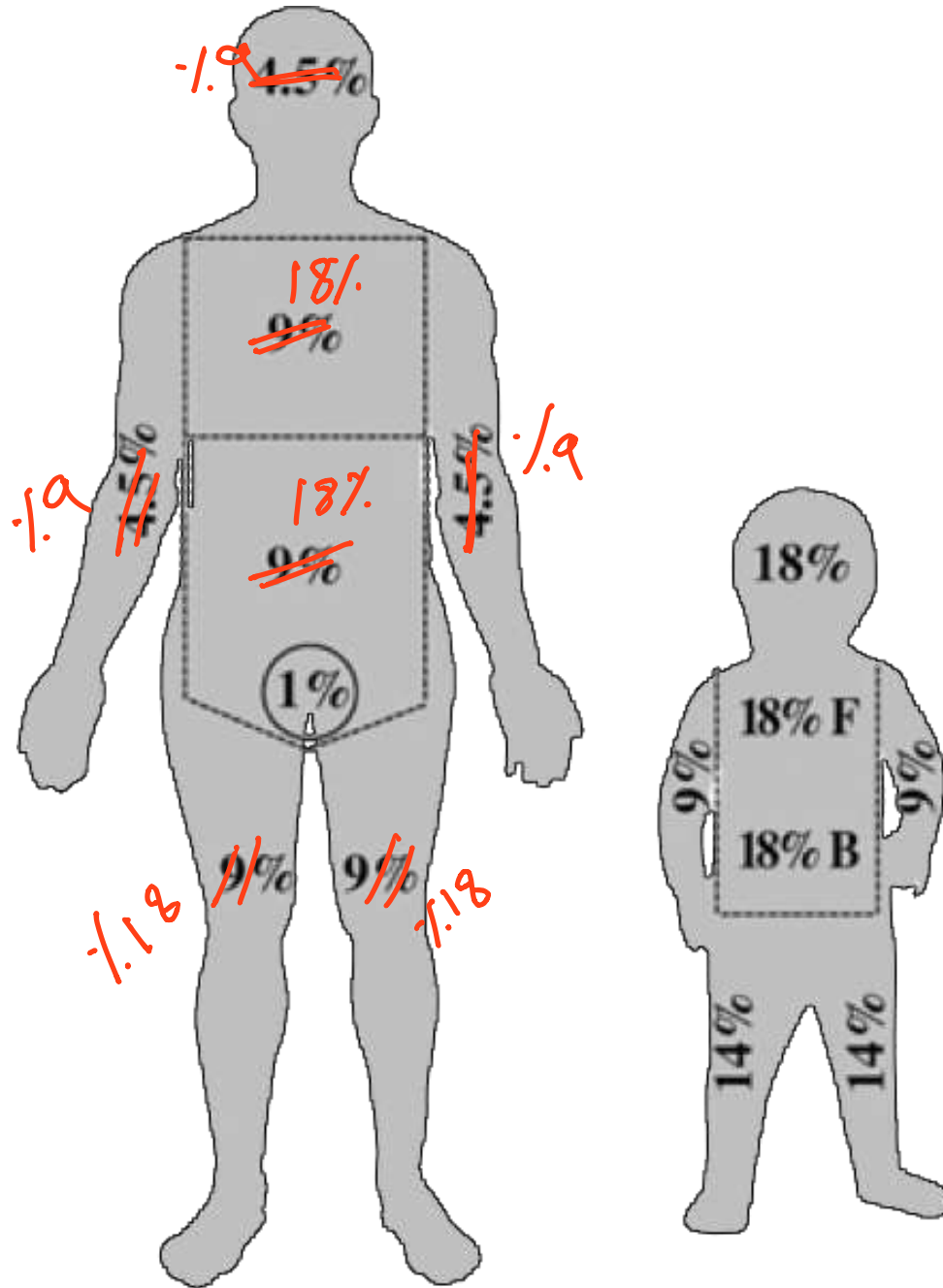
Fourth degree

Full thickness burns.

- ✦ Penetrate deep tissue to fat, muscle, bone.
- ✦ Require immediate professional treatment.

Role of 9's in Burns

not used
in children



Parkland Formula

Volume of Lactated Ringers solution:

$$4\text{ml} \times \text{BSA}(\%) \times \text{weight}(\text{kg})$$

Give half of the
solution for the
first 8 hours

Give the other half
of the solution for the
next 16 hours

Q: What is the Dx?

- 2nd degree burn



wet exudate
not only erythema
as in 1st degree
also not reach the
bone & deep muscle
as in 3rd degree
so, it's 2nd

Q1: What is the degree of burn in this image?

- 3rd Degree clear

Q2: What is the name of the scar? *eschar*

- Escharotomy → the procedure in which we remove the eschar (dead tissue)

Q3: if the burn was circumferential and the patient weight was 100 kg, calculate:

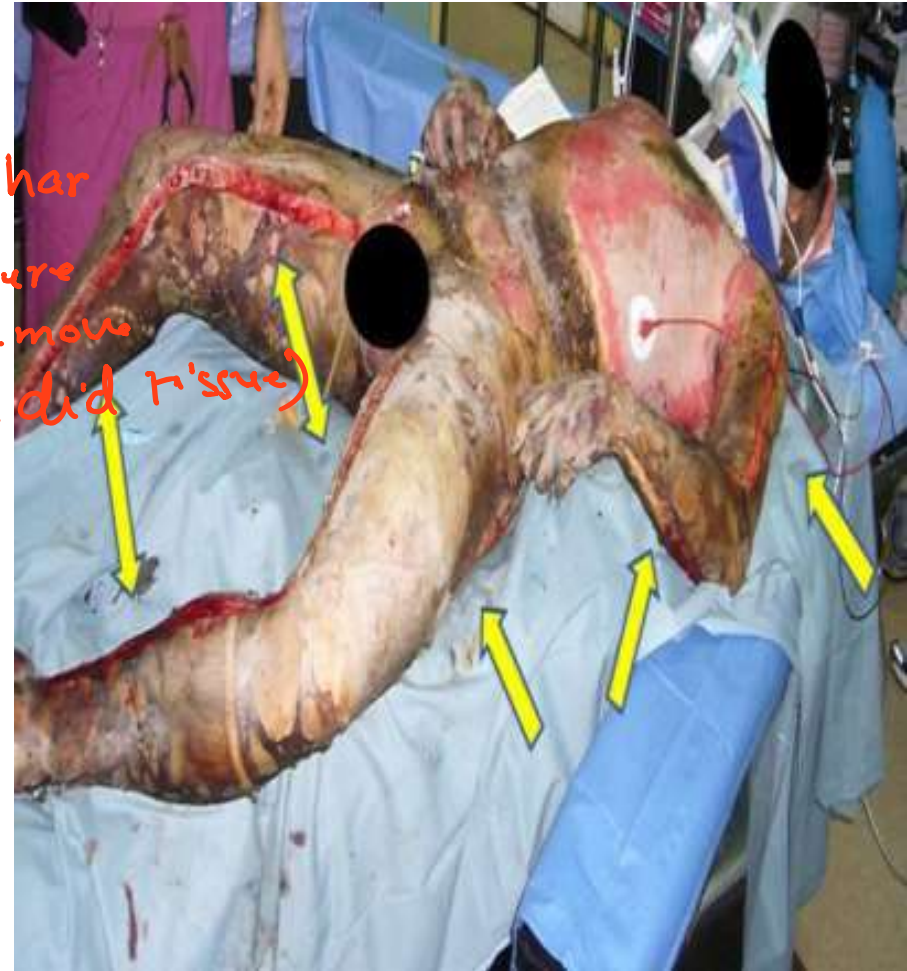
1. TBSA%:

- 100% (all the areas affected!)

2. Fluid that needed in the 1st 8 hours if the TBSA is 40%:

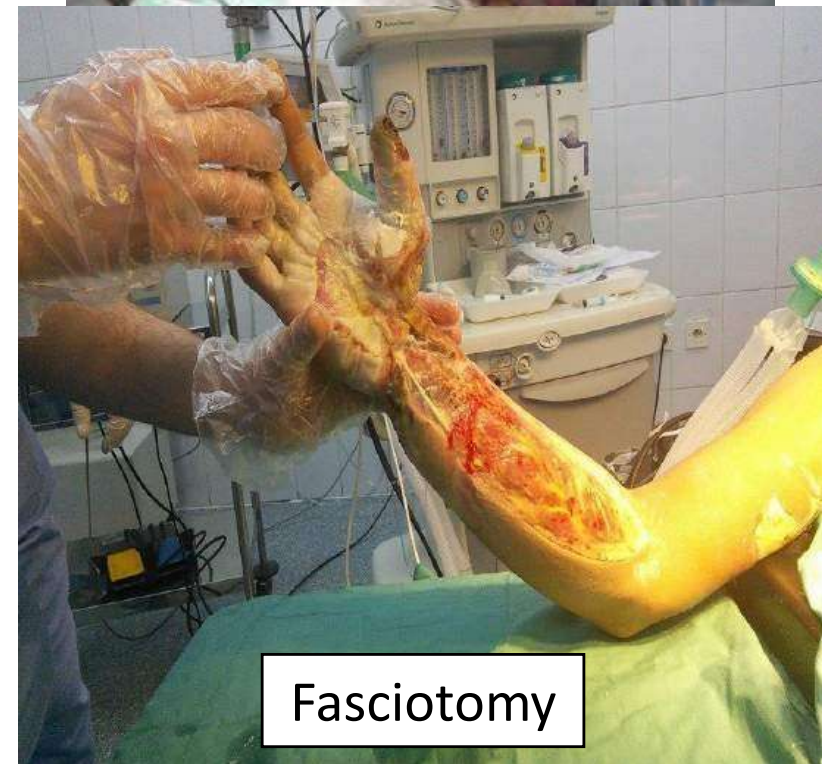
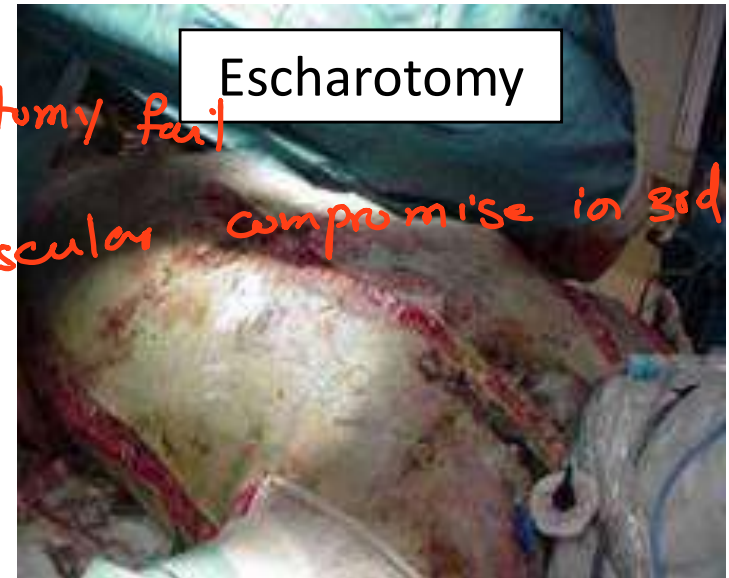
- 8 L

($4 \times 40 \times 100 = 16\text{K ml}/1000 = 16 \text{ L}$, in the 1st 8 hr we give $\frac{1}{2}$ (so 8))



Escharotomy VS fasciotomy

- fasciotomy is done in Mx of compartment syndrome after electrical burn. *or when escharotomy fail*
- Escharotomy is done to decompress tissues in 3rd degree burns. *→ impending Respiratory or vascular compromise in 3rd*
- Beneath escharotomy you will see granulation tissue, beneath fasciotomy you will see muscles.
- If ischemia is suspected, escharotomy is indicated.



Electrical burn

د لږه وخت لپاره وروسته د رهاډومايوليسيس لامل کېدلای شي چې د AKI لامل شي

- The severity depends on the voltage.
- Nerves, muscles and blood vessels have low resistance, so they are affected most.
- Skin, bone and tendons have high resistance, hence, they are less burned.

wound > burnt site
د لږه وخت لپاره وروسته د رهاډومايوليسيس لامل کېدلای شي چې د AKI لامل شي

• Management:

- ✓ Pt should be monitored for cardiac arrhythmias. *as they exposed to cardiac arrest*
- ✓ Good hydration & alkalization of urine to prevent renal impairment. *as they exposed to Rhabdomyolysis*
- ✓ Fluid management couldn't be based on calculated formula.
- ✓ Observation of limb vascularity & fasciotomy.

Some times, we do amputation for limbs
urine color due to Rhabdomyolysis that results in



What is the Dx? Electrical burn
What to do? Fasciotomy.
What is the cause of urine color? Myoglobin.
(electrical burn causes myoglobinuria)

Thermal Burn

- Temperature > 45 degrees.
- Duration of exposure is more important than degree of temp.
- Classification:
 - 1) direct flame burn
 - 2) scald burn (with hot liquids).
 - 3) contact burn with hot metals.
 - 4) friction burn.



Scald burn



Contact burn



Friction burn

Q1: What category of burn does this patient have?

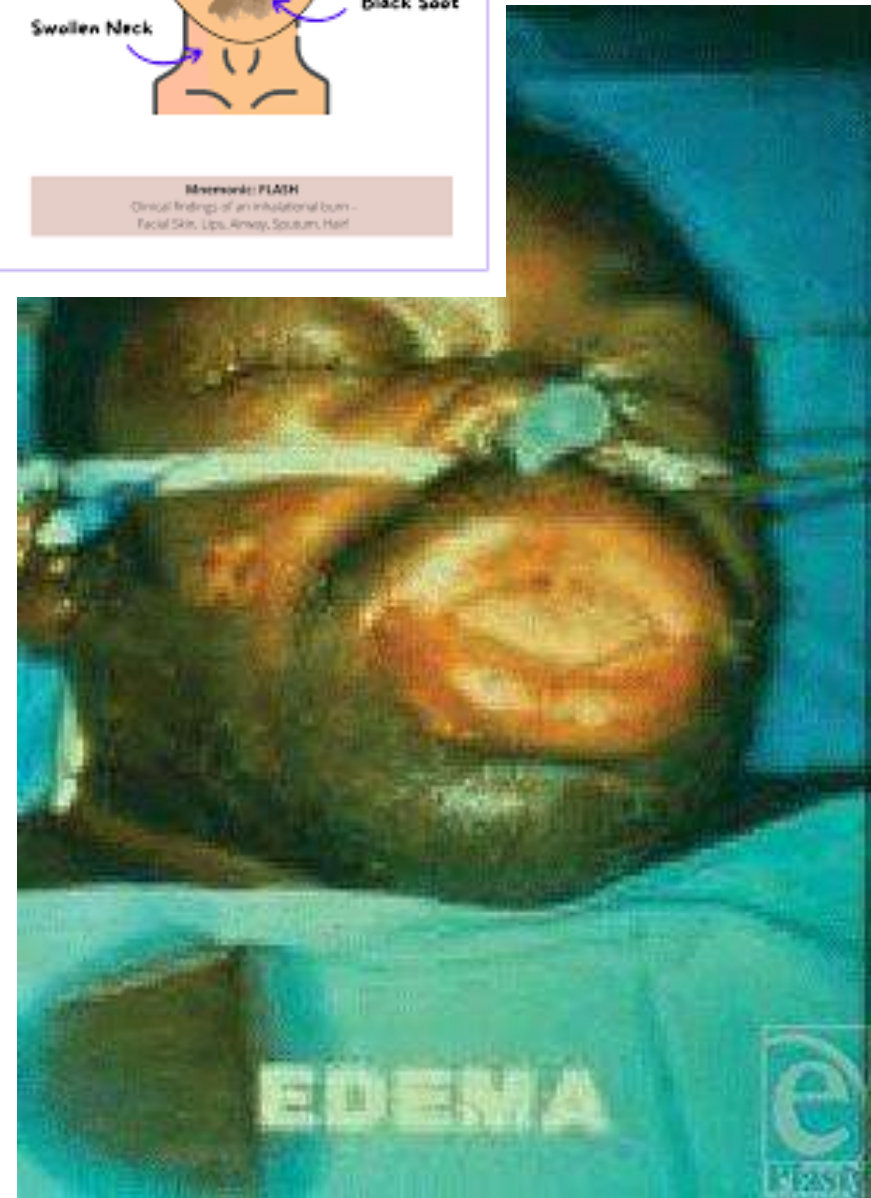
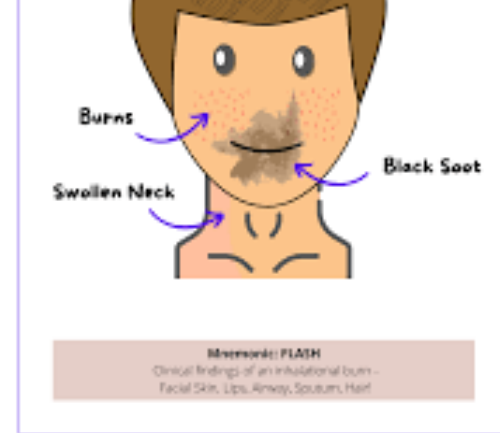
-It's a ~~facial flame burn (facial edema)~~.
inhalation burn

Q2: What is the main risk of this burn?

-the patient will have upper airway obstruction and risk of CO poisoning.

Q3: What should you do?

-The patient should be intubated before reaching to complete obstruction and give 100% oxygen if CO poisoning is suspected.



Q: This lady had a flame burn 2 years ago.

Q1: What does the image show? Post-burn fibrosis and contracture.

Q2: What was the degree of her burn? 3rd degree.

Q3: Name the most suitable type of skin graft to use in reconstruction?
Full thickness ✓

Q: Serious complication that you fear from? Transformation into SCC



Q: This baby presented to the ER with scald burn.

Q1: What is the degree of burn? 2nd degree.

Q2: Mention three lines of acute Mx of the burn:

Fluid resuscitation/ pain control/ dressing. + Ab

skin graft
بالتالي بالهنا



wet exudate
not only erythema
or reach to the
bone

Chemical burns

- Caused by acids or alkali.
- **Acids** produce **less** damage and **less** penetration.
- **Acids** produce **coagulative** necrosis.
- **Alkali** produce **liquifactive** necrosis.
- Management : dilution by water for 2-4 hrs in alkaline burn, and 30 minutes for burns caused by acids.

