

بسم الله الرحمن الرحيم

* هذا التلخيص عبارة عن جهد متواضع لجمع مواضيع الاختبار مع النقاط الأكثر أهمية الي ركز عليها الدكتور ...
حاولت انها تكون شاملة لكل شيء حتى الأشياء اللي قالها الدكتور من غير
😊تركيز عليها بس مثلا عاها مرتين او 3
فأتمنى انها تكون مفيدة لكم...

* كل الشكر للغاليات اللي ساعدوني : عهود وبشائر ونيمو:)..واكيد
مايفوتنا نشكر دفعة 424 و425 على تلخيصاتهم الرائعة اللي كانت
مرجعنا الأول والأخير..

*وان سمحتوا لي أتقدم بإهداء هذا العمل البسيط إلى تلك الشموع التي
مازال ت تحترق لأجلنا من غير مقابل فقط لتضيء لنا الطريق..إليكم يامن
أحييتم فينا الأمل..لا توفيكم عبارات الشكر فلکم منا أخلص الدعوات..
*أي فائدة طلعتوا فيها من هذه الملزمة فهي فضل من الله وتوفيق من عنده
وأي قصور فهو مني..والعذر والسموحة منكم

موفقين بإذن الله



Fire arm injuries:

***Types of fire arm weapons:**

1-breach-loaders → تتعباً من الخلف

2-muzzle-loaders → تتعباً من الماسورة

***breach loader divided into: على حسب الماسورة من جوة:**

	Non-rifled weapon	Rifled weapon
bore	Smooth	Spiral
Missiles	Shots	Bullets
Inner wad	+	-
Outerwad	+except Schneider & Remington	-

A-types of rifled weapons:

-according to the length of barrel:

1-long weapons:

a-non automatic (rim)

b-automatic (groove) → يطلع لحاله مثل بفيلم رامبو لما يطخ فيه اشيء تطير من المسدس لحالها

2-short weapons:

a- revolver

-new (jacketed) → نيكل او نحاس

-old (non jacketed)

***B-Non rifled weapons:**

1-sporting gun

2-Ghaffir guns

***types of powder:**

a- black powder: this is composed of

carbon (اهم مكون), sulphur, potassium nitrate

- On ignition 1 volume of black powder give 300 volumes of gases.

b- smokeless powder:

-on ignition 1 volume of smokeless powder give 900 volumes of gases

!!! IMP.

BLACK POWDER → 300/1 VOLUME, alkaline

SMOKLESS POWDER → 900/1 VOLUME, neutral

***product of firing gun:**

1-the flash of light

2-the gases → go for 15 cm → cause tearing (laceration) of the skin

3-Flame → moves about .5 of the barrel length (BL) → cause burn

4- smoke → moves about 1-1.5 BL → blacking of the skin

5-un burnt powder particles → 2-3 BL → tattooing

6- internal wad → up to 3 m → penetration

→ 3-10m → abrasion

7-external wad → up to 1m → penetration

→ 1-3m → abrasion or contusion

→ 3-10m → no effect

main function is to keep the shots from falling

8- shots → come out from the muzzle close together forming one mass producing central hole up to **2 meter**, then start of disperse with central hole diminished in size until it disappears at full dispersion which occurs at **4 meter**

***estimation of the distance of firing:**

*powder marks (very important):

Gases → laceration

Flame → burns

Smoke → blackening

Unborn particles → tattooing

a- short distance (near firing):

the estimation of distance is based on the presence of the powder

b-long distance (far firing):

>SHOTS:

-at 2 meter & more start of dispersion, i.e. central hole & few surrounding separate shot holes

-at 4 meters complete dispersion of holes having a circular diameter of about 16 cm

>BULLETS:

-at point blank firing (0-15 cm): the inlet is cross shaped and everted : burnt (flame), blackening (smoke) and tattooing (unburnt particles)

-contact firing : burning takes **the shape of the muzzle**.

Blackening, tattooing, and powder marks are minimal because the missile had entered inside the opening. The wound, i.e. the inlet is everted

***characters of firearm wounds:**

1-loss of substance, especially at the entrance (**most important**): it depends on:

A-size of missile B-velocity C-distance

2-the presence of 2 wounds, inlet & exit, or may be 1 wound (inlet, due to far firing & the missile is retained inside the body, in cases if the bullet pass tangentially (grazing of the bullet تزحلق). It may also appear just as an outlet when firing from the mouth.

3-possible presence of associates of projectile, i.e. powder marks

4- Beveling occurs in flat bones

***factors affecting the shape of the arm wounds:**

1-the type of weapons (short or long) & missiles (shots or bullets)

2-distance of firing: 1 central hole (near firing) or dispersed shots (far firing)

3- Direction of firing: a perpendicular

(لو البني ادم واقف قدام المطلق)

injury causing a circular wounds, a tangential (لو جاله من الجنب)1 causing a tract, and a slanting firing causes an oval wounds

4- Site of the wounds.



****There is always a room at the top****



DRUG DEPENDENCE:

*drug dependence is a physical & psychological state resulting from the repeated (chronic) interaction between a living organism and a drug, characterized by:

1-irresistable desire to take the drug

2-tolerance: increase the dose to get the same effect

3-physical & physiological dependence: can't perform the daily activities without taken the drug.

4-harmful effects to the individual and society

5- Withdrawal symptoms (**the most dangerous**)

*drug habituation is a condition in which the individual feels a desire for the drug, without suffering any ill effects, and when such a drug is not taken, it leads to emotional instability (only psychological). There are no withdrawal symptoms, no tolerance, and no physiological dependence on the drug.

***diagnosis of dependence:**

-history from the addict, his relatives, or friends.

-Appearance of withdrawal symptoms if the drug was not taken in the last 24 hours.

-constriction of the pupils in case of opiates (morphine)

>> Nalline test for opiates (diagnostic للناس اللي بياخذوا مورفين):
injection of 3 mg Nalline leads to rapid dilatation of pupils, which is normal in a healthy person, but remember that the pupils originally constrict with opiates.

***Opium Dependence:**

-clinical picture:

The best answer: contracted pupils; morphine causes a pinpoint pupil (PPP)

-Withdrawal symptoms:

-They usually start after 12-24 hours from the last dose.

-Neonates from drug- dependent mothers may show withdrawal symptoms up to 56 hours from birth and will require therapy.

-Abrupt withdrawal is dangerous & very difficult in opiate addiction.

***Cocaine Dependence:**

-Clinical picture:

- Nasal septal perforation if taken as snuff. The addict won't feel pain because it is an anesthetic itself.

-Tactile hallucinations or cocaine bugs: the addict feels as if insects were creeping under the skin (**THE BEST SIGN & CHARACTERISTICS**)

- Cerebral hemorrhage with increase blood pressure.

*Alcohol Dependence:

- liver cirrhosis due to protein and vitamins deficiencies (the most common complication).

- Alcoholic paranoid states and Korsakoff's psychosis; loss of the recent memory, and maintain the old one.

-the addict become selfish and jealous (ممکن یئذی غیرہ)

~treatment:

-Diazepam or chlorpromazine if there is convulsions

-lumbar puncture for delirium tremens

-Mannitol for cerebral edema.

-Disulfiram (antabuse): given orally to interrupt the oxidation of alcohol at the stage of acetaldehyde, leading to its accumulation, and given the feeling of distress, palpitation ,and nausea and vomiting. this makes the addict hate to drink alcohol (impo.)

*Barbiturate Dependence:

-Clinical picture:

- Neurological signs: tremors, thick slurred speech, ataxia, nystagmus and ((dysdiadokinesis→best signs))

- Physical signs: anorexia, constipation, skin rashes, anemia, cyanosis, and renal manifestations

- Mental disorders: poor memory, mental confusion, and negligence of personal appearance.

~Treatment:

- The addict must be hospitalized.
- Abrupt withdrawal is dangerous; gradual withdrawal is the ideal method.

***Amphetamine Dependence:**

-clinical pictures:

- Anxiety, palpitations and tremors
- Cerebral hemorrhage because of hypertension which may lead to death.
- Visual and auditory hallucinations (**THE BEST**)
- Shock or collapse, especially when vigorous exercise is undertaken.
- Behavior changes in form of antisocial activities.

***Tranquilizer Dependence:**

- Prolonged use of minor (not major) tranquilizer because of their rapid, e.g. valium (diazepam) and meprobamate.

~~Diazepam → best drug of controlling convulsion~~

- Clinical pictures:

- Masked face, **the most characteristic feature.**
- depression

- dry mouth
- dilated pupil
- hypothermia

***Volatile solvent inhalation:**

- Most commonly found among poor young male (Impo.)
- These compounds are highly lipid soluble & therefore have marked effects on nervous tissues.
- snuffers are unlikely to seek medical advice or attention (not because of dependence) because they develop some serious acute complication such as a deep coma.
- however, they may present later with:
 - Acute encephalopathy, the most serious; it is usually irreversible (important.)
 - jaundice
 - renal failure
 - cerebellar degeneration.
 - Mixed polyneuropathy.
- ~Treatment:
 - stopping solvent inhalation, **the most important step.**
 - sedation if there is a state of panic.
 - comatose patient require supportive measures to ensure a clear airway and adequate oxygenation.

***Anabolic Androgenic Steroids:**

- male hormone taken by athletes to build their muscles (impo.)
- clinical picture (more in females):
 - Renal and hepatic failure
 - Gradual harmful effect
 - Malignancy in sexual organs.



Good judgment comes from experience, &
experience comes from poor judgment !!



General toxicology:

-toxicology is the science of medicine which deals with poisoning, its diagnosis and management.

-the poison is any product or substance that harms someone if used in the wrong way by wrong person, or in the wrong amount. The harmful effect varies, and can cause death.

*classification of poisons:

1-according to their action (**THE BEST CLASSIFICATION**):

-poisons with a local action → acids and corrosive
يتحط على العين اه ياداني، مثل يتحط على العين اه ياعيني

-poisons with remote actions; they act after absorption , e.g.
morphine and atropine يشتغل في مكان بعيد

-poisons with both local & remote actions, e.g. irritant (heavy)
metals as arsenic.

2-according to the organs affected

3-according to the chemical nature

***factors affecting the action of Poisons:**

1-age: children die in a little amount

2- Personal hypersensitivity

3- Tolerance

4-idiosyncrasy

5- State of health

6- Condition of the stomach

7- The type of food:

-arsenic (fat insoluble poison) effect is delayed or even absent if taken with fatty meal. Conversely, a fat soluble poison (phosphorus) gives rapid effect.

- acidity: combination of cyanide and achlorhydia gives no effect (no absorption) → IMPO.

8- synergism

9-state of poison (gases produce the fastest effect) then liquid then solid poisons

10-methods of administration: the most rapid is inhalation
→ IV → IM

11-Dose of poison (the most important factor): the more the dose, the higher the effect, but very high doses lead to vomiting, which decreases their effect (antiemetics are contraindicated in poisoning)

*Diagnosis of Poisoning:

A-history & circumstantial evidence

B-clinical picture:

-constricted pupils are seen with morphine, while dilated pupils are observed with atropine, cocaine

-red skin: CO (forming carboxyhemoglobin) and cyanide

-flushed face & red mouth: atropine & alcohol poisoning

-patches around the mouth are seen with corrosive.

-characteristic smell of the mouth in cases of kerosene, alcohol, phenol (detol) and acetone.

-fever: atropine (antispasmodic), salicylates (antipyretics) in over dose, kerosene & tricycles antidepressants.

-coma

-convulsions

-slow pulse occurs with morphine, and digitalis poisoning, while rapid pulse happens with atropine, nicotine and corrosive poisoning.

C-Radiopacity of poisoning : بعض السموم تبان في الأشعة

D- Chemical analysis the most important evidence of poisoning)

E-Autopsy in suspected poisoning (PM)

F-Screening tests (rapid):

-these are various tests to evaluate the type (and regularly measure the amount) of legal & illegal drugs that a person has taken, which done by special mechanism and tools.

***General Lines for Treatment of Poisoning:**

Treatment of the presenting clinical condition is the main priority, regardless the type of the poison...

1-decontamination:

A- Skin e.g. corrosive, acids, insecticide:

Most important point is: flush the exposed area by copious quantities of lukewarm water or saline; use soap with lipid substances

B- Eyes e.g. corrosive agents and solvents:

-Toxins that are readily absorbed through the skin can also be absorbed through the cornea.

-Most important point is: flush by copious quantities of cold water or saline: use at least 1 liter to irrigate each eye.

C- Inhalers e.g. irritant gases, fumes and toxins that are absorbed through the respiratory tract (CO, cyanide....)

Most important point: observe for evidence of upper respiratory edema (manifests as stridor and hoarseness) or noncardiogenic pulmonary edema (manifests as dyspnea, tachypnea, cyanosis and hypoxemia).

2-supportive care:

The drug will be progressively eliminated over the next 12-36 hours in most patients, and usually this is all the care that is necessary.

3-prevent further exposure to poisons:

- Suicidal cases must be hospitalized
- In cases of toxic inhalation, the first priority of treatment is removal of the patient from poisoned environment to fresh air and giving oxygen.

4-removal of the unabsorbed poison:

A- Emesis:

*Methods:

- 1) Mechanical: by the use of the index finger , the handle of a spoon or tongue depressor to irritate the pharynx.
- 2) Chemical: syrup of ipecac (the best method) it is natural substance 'plant' cause vomiting after 15-30 minutes (وفي رواية أخرى 😊 from 10-20 minutes)

-It is the emetic of choice in both children over the age of 6 months and in adult.

Dose: (VERY important):

The dose in adult → 30ml, in children → 15 ml

*syrup ipecac → the best to induce vomiting and the safest ((it is irritant , لأنه حاجة مرة, ...after awhile it works central))

*Contraindication of emesis :

- Chronic poisoning for more than 6 hours (the most impo.)
- Comatosed, semiconscious → aspiration
- a corrosive poison because it may lead to perforation
- antiemetic poisoning

B-gastric lavage:غسيل المعدة

Recently, gastric lavage is considered only if life threatening amount of poison is ingested within one hour.

*Contraindication:

1. Corrosive poison.
2. Poisoning with mineral acids and alkalies.
3. Chronic poisoning, for more than 6 hours , cause its already absorbed .except: Salicylate, Antiemetic poisons → stick on the stomach mucosa, and drugs which decrease gastric motility.
4. Kerosene and related petroleum distillate poisoning(volatile)
5. Comatosed patient
6. varices

*complication:

- 1) Perforation of the esophagus.
- 2) Aspiration pneumonia cough and cyanosis indicate that the tube is in the trachea. يعني لو العيانة كحت او انخنقت وازرقت معناها انا عملت شيء غلط ولازم اسحب الانبوب
- 3) Chemical pneumonia.

5-Inactivation of the poison in the stomach:

- Types of antidote (is very imp.):

Local antidote.

Systemic (Physiological) antidote.

-Local antidote: They are substances which stop or neutralize the poison or its harmful effect on the stomach.

-The toxins will remain in the stomach but become intoxicant.

A. Physical antidotes:

These agents interfere with the ingested poisons through physical means only and do not change the chemical nature.

They include:

1. Demulcents: يغلف جدار المعدة:

-Use in corrosives like flash

-Which coat (soothing) the gastric mucosa e.g. milk, row egg and olive oil

2. Diluents: يخفف

Like water which dilutes some poisons.

3. Adsorbents (ادمصاص)

- Adsorption = just binding to the surface
- Absorption = enter inside

- Activated charcoal (imp.)

B. Chemical antidotes:

These act by changing the chemical nature of the poison by chemical reaction producing less or non-toxic form.

-They include:

1. precipitating antidotes: مثل الشاي والقهوة:

2. Oxidizing antidotes:

Potassium permanganate 1/5000 solution in a dose of 150 ml orally is used in plant and phosphorus...

أستخدمه لما اكون شاكرة ان الفواكه والخضار تكون مرشوشة بمبيدات

3. Reducing antidotes: في حالات التسمم بالزئبق

→E.g. sodium formaldehyde sulphoxalate →Given in cases of mercury poisoning to reduce it to less toxic insoluble mercurous form.

4-Household antidotes:

They are substances are available in house and can be used as a first aid treatment of poisoning.

The BEST physical antidote is:

-Activated charcoal

The most common household antidote is:

-Milk

6-Enhancement of Excretion:

A-Poisons eliminated through the lung (in expired air) e.g.alcohol:

→This can be done by inhalation of oxygen 95% and 5% carbon dioxide →to increase the depth and rate of respiration. (bec. Its stimulate the respiratory center)

B-Excreted by bile e.g. morphine: treated by multiple dose activated charcoals.

C. Eliminated by intestine (in stool): treated by laxative (purgative).

***Alkaline dieresis:**

-by promoting alkaline urine (Ph 7-8)

-Both tubular (aspirin) and Phenobarbital are weak acids. These drugs will become more ionized in the distal tubular lumen, which will slow tubular reabsorption and allow a larger fraction of the drug to be excreted without being reabsorbed back into the body. (important)

***Acid dieresis:**

-treat alkaline poisons, e.g. amphetamine, kinin, phencyclidine.

***hemodialysis (artificial kidney):**

- Use in nephrotoxic poisoning.

-Indications for dialysis:

1. Immediate dialysis indicated for only two drugs, methanol (That cause blindness) and ethylene glycol (important)
2. Dialysis on the basis of patient condition e.g. renal failure, acid-base disorder, hypothermia and electrolyte disorder.

***Peritoneal dialysis: طريقة ظرفية وخفيفة**

Complications:

1. Injury or perforation of intestine or bladder.
2. Peritonitis. (sepsis) → (most important)
3. Intraperitoneal bleeding.
4. Electrolyte disturbances.

***hemoperfusion:**

It is indicated for a massive intoxication when the extracellular distribution of the poison is significant (important)

7-Administration of physiological Antidote if Available (counteraction):

A-Antagonists:

- Strychnine poisoning causes convulsions which is best treated by IV diazepam 10mg (important)
- Atropine antagonizes muscarinic action in organophosphorus poisoning
- Pilocarpine antagonizes the peripheral action of poisoning.

B-Chelators:

- BAL (British antilewisite) in arsenic poisoning.
- EDTA(Ethylene Diamine Tetra-Acetate)in heavy metals poison.
- Nalxone in morphine poisoning.(receptor blocking) and also antagonize most of the narcotics. اهم واحد وأحسن واحد

8-symptomatic treatment:

A-shock (cardiac failure):

- SB is less than 90 and DBP below 60 (in children SBP less than 80/60)
- the first & easiest thing to do is elevation of the bed foot (important)
- IV Injection of fluids and Plasma expanders e.g. dextran.
- Vasopressor drugs are given until until the BP reach 100 mmhg then stop the drug. Because it will affect the kidney (oliguria) → Renal Faliure.
- Hydrocortisone ,100mg ,if no improvement.(increase blood pressure)

B-coma (CNS depression)

<p>Stage 1 يامحمد..ها؟..يامحمد..ها قوم اصحى ..ها؟ -respond to spoken stimuli. -Drowsiness -normal response to pain</p>	<p>Stage 2 يامحمد ..يامحمد...مابيرودش بس الرفلكسز موجودة -The pt is unconscious . -respond to painful stimuli, - intact superficial&deepreflexes</p>
<p>Stage 3: يامحمد..يامحمد مابيرودش ومفيش سوبرفشال رفلكسز -The pt is unconscious. -No superficial reflexes</p>	<p>Stage 4: مافيش لا سوبرفشال ولاديب -Most dangerous stage No superficial reflexes or deep reflexes.</p>

-management:

***1-Care of respiration: Endotracheal intubation (maximum 48 hrs>>it cause ischemia &necrosis)then tracheostomy ,suction of secretion , oxygen inhalation & mechanical ventilation.(اهم وحدة)

2- NEVER give analeptics.

3-If the pt enters (ER) with an altered mental status,Give therapeutic agents that are considered safe e.g. DONT (Dextrose, Oxygen, Naloxone & Thiamine) Since naloxone is a pure narcotic antagonist, it will not cause any deterioration of the pt condition.→Dextrose & thiamine will not harm the hyperglycemic pt.

C-convulsions (CNS stimulation by atropine) →can cause death..

-Treatment:

Control convulsions by Diazepam (the drug of choice and best treatment),barbiturates or succinylcholine.

D-Disturbances in body temperature:

*Hypothermia:

-Rectal temp $<36^{\circ}\text{C}$

-In case of Barbiturate overdose.

-Treat the pt. in warm room & wrapping with blankets.

*Hyperthermia:

- $>38^{\circ}\text{C}$

- Keep the pt in a cool, well ventilated room ,ice bag (The best), antipyretics & antibiotics may be needed.



****أقبل على النفس فاستكمل فضائلها ..فأنت بالروح لا بالجسم إنسان****

✚ ASPHYXIA:

- Definition: Conditions in which the oxygen supply to the blood and tissues has been reduced below the normal working level (or below the level of tissue demand) by any interference with respiration.
- Asphyxia is used as being equal to (lack of oxygen), hypoxia or anoxia.
- The normal O₂ saturation is: up to 100% & is measured in arterial blood.
- When the saturation reaches 60% the pt. will be Cyanosed & drowsy.

● Gordon's classification:

1. Anoxic anoxia: ماڤيش اكسجين خااالص (defective Oxygenation):

- A- Oxygen absence.
- B -Obstruction of respiratory passage.
- C -Obstruction of respiratory movements.
- D - Depression of respiratory center: Morphine (opium overdose) and head injury.

-Diseases that stop respiration: Myasthenia Gravis, Poliomyelitis.

-The most common cause of anoxic anoxia is OBSTRUCTION OF RESPIRATORY PASSAGE.

2. Anemic Anoxia (in blood): Decrease O₂ carrying capacity of the blood:

- hemorrhage: (hypoxia caused by decreased oxyHb)
- CO: CO with Hb (CarboxyHb) which prevent O2 binding to Hb.

3. **Stagnant Anoxia:** Late stage cardiac heart failure>> decreased circulation >> O2 slowly reaching tissue.

4. **Histotoxic Anoxia:** With Cyanide poison>> Red asphyxia= Red Death= Red hypostasis

**** 3 Cs & N cause Red Death: Cyanide, CO, Cold & Nitrite.*****

***Stages of Asphyxia:**

Stage1: of Dyspnea

- Accumulation of CO2 leads to reduce Hb (**Cyanosis occurs**)
- This result in rapid deep breathing with using of accessory muscle of respiration.

Stage 2: of convulsion

- With Increased breathing >>Reduced Hb. >> Convulsions That Increases BP Causing rupture of Small veins >> Giving the **Petecheal hemorrhage**.
- Convulsion occur

Stage 3: stage of apnea , Respiratory paralysis

- **Gasping of air**, Shallow breathing >>>>coma & death

N.B. Asphyxia is a mechanism of death not a cause of Death

- The most characteristic feature of stage 1 → cyanosis
- The most common characteristic of stage 2 → petecheal hemorrhage
- The most common feature of stage 3 → gasping for air & apnea

● External and Internal Postmortem (PM) Picture:

■ External PM:

1. Petecheal hemorrhage is the most imp. **The Best site to see it is sclera.** But it is present all over the body.
 - They are often called tardieu spots.
2. Cyanosis: detected in ear lobule, lips & fingernails.
3. Hypostasis: deep blue color due to excess reduced Hb.
4. Rigor mortis: Rapid, Convulsions consume ATP
5. Putrefaction : Rapid , due to congestion of blood which create a good media.

■ Internal PM:

1. Petecheal hemorrhage under the pleura and pericardium and in the internal organs
2. Congestion and edema of the viscera (Except the spleen) b/c the spleen is a blood reservoir. So, contracts to push blood inside it to other organ
 - This process is called auto transfusion in stress
 - يعني لما الدماغ يحتاج دم يصرخ وينادي على السبليين :انت ياخ اللي تحت
 😊 احنا بنموت هنا فوق .. ارسل لنا شوية دم
3. The blood is dark in color (Reduced Hb). & fluidly b/c of fibrinolysin which is released in stress.
4. The right heart and great veins are engorged with blood

*Violent Asphyxias Death:

في الحبل, ligature strangulation , الانتحار حالات في الحبل Hanging
ريا, (Smothering), manual strangulation باليد (throttling), الجنائية الحالات
غصة , traumatic asphyxia : واحد بياكل لحمه وعلقت في زوره chockin النفس كتم) وسكينة
(Crush syndrome) بلال بن رباح asphyxia

*1-Hanging:

- very common way of suicide
- Judicial hanging in some countries (من وسائل الإعدام القضائي)
- Could be complete or partial.
- Complete : رجوله ما تلمس الأرض -بيتمرجح
- Partial: يعتمد ع ثقل الجسم -رجلينه تلمس الأرض
- Could be Typical or Atypical.
- Typical: الياباني الاصيلي العقدة تصير ورا
- Atypical: العقدة تكون ع اليمين او اليسار .. او واحد عبيط حطها من قدام
- Rope mark is not complete in hanging. Absent at node.
- If the hanging is more than 8 inches, the neck separates from the body(the higher, the more likely the neck will

عشان يصير كسر لازم يكون واقف على طبلية ..كل ما علت (Separate)
المسافة كل ما صار الكسر أكثر

*Mechanism of death:

A-Cerebral anoxia→most common cause

B-cerebral congestion

C-Asphyxia

D-Reflex vagal inhibition =reflex vagal stimulation=
parasympathetic shock

*Signs:

A- externally:

- The face will be pale: (occlusion of carotid arteries) or bluish (only veins are occluded)
- The neck is stretched.
- **Very important:** saliva may be seen dripping from the mouth (due to pressure on the salivary glands), this is a vital signs if present in hanging but not in PM suspension.
- Ligature mark: incomplete, oblique... But is complete in Running noose (العقدة المنزلقة) & double turn.

B- internally:

- Fracture of the hyoid bone (outwards fracture) rarely occur. Petechial hemorrhage and ecchymosis of the subcutaneous tissues under the ligature (علامات حيوية), but **NEVER** in postmortem suspension
- 99% of hanging cases are suicidal.

Hyoid Bone is

Rarely fractured in hanging

May be fractured in strangulation

Always fractured in throttling

*2- ligature Strangulation:

- Usually, Homicidal
- Externally:
- The tongue may be protruded, swollen and bitten (مهم أوي)
- ligature mark : (shape as in hanging), (situation transverse & complete usually)

Methods commonly used for homicidal strangulation:

1. Mugging; by compressing the victim neck against the forearm.
2. Garroting; by attacking the victim from behind and grasping his throat or throwing a ligature over the neck and tightening it quickly.
3. Bansdola; by compressing the neck between 2 sticks في الهند
4. Throttling; by compressing the victim neck by the hand

Medico legal aspects:

- A PM swelling of the neck associated with exaggeration of skin Folds** or any other ornament worn around the neck may produce depressed marks.
- **Skin folds in the neck of obese person may be confused with ligature marks, because of their redness as a result of sweating (No underlying bleeding)

Suicide, homicide, or accident t?

- A. Suicide: (not common)
- B. Accident: (rare)
- C. Homicide: (common)

Hanging	Strangulation
<p>- Suicide</p> <p>-Oblique</p> <p>- high up</p> <p>-incomplete due to the presence of the node</p> <p>-No resistance marks</p> <p>- Hx of Psychosis.</p> <p>-Stretched neck due to body wt.</p> <p>-fracture of hyoid bone rarely occur</p>	<p>-Homicidal (commonly)</p> <p>-Transverse</p> <p>- low down</p> <p>- complete (usually)</p> <p>-Resistance marks are present</p> <p>-Criminal evidence, threading by enemy.(push it, خربشي it, اعضضي it 😊)</p> <p>-fracture of hyoid bone may be occur.</p>

Rope
mark

3- Manual strangulation(Throttling):

External appearance:

Injuries on the neck:

1. Abrasions (caused by finger nails) الأظافر الطويلة → important
2. Contusion (caused by finger pads) → important
3. Both are found on the front and sides of the neck.
4. If one hand is used: 4 are found on one side of the neck and 1 on the other side.
5. If both hand are used: multiple are found on both side of the neck.

Internally:

As in ligature strangulation, but fracture of hyoid bone is more common.

- Hyoid fracture more common in : Throttling
- Hanging most commonly : suicidal
- Strangulation most commonly : homicidal
- Smothering most commonly : homicidal

4-Smothering كتم النفس

-A violent asphyxia caused by mechanical occlusion of the air passages from outside (i.e. the mouth and nostril) by hand or by any object

PM picture:

- Asphyxial signs will be present except in case of plastic bag suffocation (No signs of resistance, Commonly in children)
- Abrasion and contusions (by hands) on the skin of the face around the mouth and nose:
 - (Absent if a soft material -such as a pillow- is used)
 - we can detect that by:
 1. Contusion and sometimes lacerations on the inner aspects of lips and cheeks. راح تعلم الأسنان على الشفة من ضغط المخدة من برة
 2. Contusions of the gums, broken teeth and flattening of the nose.
- ❖ Smothering is accidental (MOST COMMONLY):
 - In children playing with plastic bags.

-An alcoholic adult who rolls over (during sleep) and his face in the pillow due to CNS depression he can't move.

5. Choking الغصة

ممکن يموت الشخص خلال 5 دقائق-

-The most common cause of choking is : (accidental)

May arise from :

1-Inhalation of irritant fumes.

2-Cafe coronary: All reflexes are depressed, they have weak laryngeal reflux so when food bolus stuck it can't be expelled
→anoxia → cardiac arrest.

6- Traumatic asphyxia (crush asphyxia)

A violent asphyxia resulting from trauma to the chest or pressure on the chest and abdomen which prevent respiratory movements.
(car accident)

Causes traumatic asphyxia:

A. Trauma to chest which may be:

1. Penetrating trauma e.g. stab injury → pneumothorax →lung Collapse→asphyxia

2-(**MOST COMMON**): Non-penetrating trauma e.g. run-over car accident (the chest is congested with blood & the lower limb is pale)→ fracture of ribs → restriction of respiratory movements as a result of the severe pain during respiration ® Respiratory failure

B. Pressure on the chest and abdomen:

مثل الشرطة لما يجوا يثبتوا الحرامي على الأرض ..او الممرضين في مستشفيات
الأمراض العقلية لما يجوا يربطوا المرضى

All The Luck...



NoVa

