

** بالنسبة للـ neurovascular assessment لازم نشيك عالـ P's 6 واللي همة:-

Pain, paralysis, paresthesia, pulse, polykothermia (coolness)
+ swelling + capillary refill

** كمان لازم نشيك عالـ Range of motion وأنواعهم - <

1. Active → pt able to demonstrate this exercise.
2. Passive → the nurse will do this exercise to the pt.
3. Isometric → contract for the muscle only without contract the part of the body.

↗ quadriceps setting exercise → عضلة الـ thigh

↘ gluteal setting exercise → abdomen & buttocks الـ عضلتي

10-5 seconds Q 1 hrs

isometric exercise الـ أهمية << عشان يمنع ضمور العضلات الـ Atrophy.

**Diagnosis for pt who has a cast:-

1. Acute pain R/T fracture of the bone AMB pt verbalization.
2. Impaired physical mobility R/T presence of cast AMB pt verbalization.
3. Risk for complications.
4. Knowledge deficit Regarding to self-care for cast R/T first experience AMB pt verbalization.
5. Impaired skin integrity R/T fraction of the bone AMB observation of incision.

** ايش نوع الـ diet اللي لازم نحكي للمريض يمشي عليه بهاي الحالة؟!!!

↑ Ca diet, ↑ Fiber diet [to avoid constipation – bowel sound less than 5]

* بس بحالة اذا كان المريض bed rest ما بحكيه يزيد الكالسيوم لأنه بخاف يتكون عند stone

** suspected complication from using cast:

1. Skin pressure. 2. Pneumonia [accumulation of secretion] aspiration يعني بصير
3. Constipation (normal bowel sound 5-34). 4. Foot drop. 5. Bed sore.
6. DVT → +ve homan's sign:- make dorsiflexion if the pt feel pain in his calf
* هاد البروسيجر مش specific وصار contraindication لأنه بنخاف الـ clot تتحرك من مكانها...
7. Compartment syndrome: compression on the nerve and artery of the blood vessel →
deep layer الـ الحالة بيضطروا يفتحوا الـ

*Ch.Ch of compartment syndrome:-

- 1- Excessive pain which not relived by analgesic. 2- Excessive swelling.
- 3- Inability to move of fingers or toes. 4- Poor capillary refill. 5- Weak pulse and redness.

** بحالة انه اجينا مثلاً بدنا نعمل Palpation للـ brachial pulse بالمنطقة المتأثرة، وما قدرنا نحسه بنروح عالـ Radial
اذا الـ Radial نفسه ما حسيناه معناته في مشكلة بالـ Perfusion << يعني distal to proximal

*Interventions (compartment syndrome):-

removal of the cast, dressing, general anesthesia, open the muscle and cut it.

*Late complication → - malunion → refracture غلط فيها Cast الـ يكونوا مركبين الـ

- union → مثل المرضى اللي عندهم سكري

الـ healing process عندهم بطيئة وأيضاً مرضى الـ osteoporosis

- disuse syndrome → atrophy in the muscles.

* في حالة اذا كان العظم نفسه متكسر لازم نصحح العظم بعدين تركيب Cast

سurgical procedure , **two types**: -

1. Close reduction → cast الطيب بلف يد المريض وبصح العظم بعدين بحط ال cast
 2. Open reduction → muscle muscle وبعدين العظم وبحط الطيب plat عشان يثبت العظمة بفتحوا ال muscle
- ORIF [open reduction interned fixation].
** طبعا لازم نعمل X-ray قبل وبعد العملية.

*Nursing care after casting:-

- Avoid water [keep dry].
- Avoid sharp instrument to rub the affected area.
- Make active, passive, isometric exercise.
- Assess 6p's and swelling and capillary refill.
- Keep it clean.
- Don't cover it or itch it.

إذا كان مريض صغير بالعمر، وضله يبكي عشان بده يحك تحت الجبيرة، ممكن أعمله سشوار بارد، أو بالمروحة ، يعني بس أبرد المنطقة المتأثرة .

Traction:- it's an application of a pulling force to the body part.

Pelvic fracture هو الحل الوحيد للـ

*Uses of traction:-

1. To minimize muscle spasm.
2. To decrease deformity.
3. To realignment of bone before surgery.

*Types of fracture:-

1- skin traction → attached to the skin

^external – (2-3) Kg – period of treatment: short

2- skeletal traction → attached to the bone (general أو local anesthesia لـ بحاجة)

^Internal – (7-12) Kg – period of treatment: long

*Other uses of traction:-

-CDH → congenital dislocation of hip.

-DDH → developmental dislocation of hip. ويمكن منذ الولادة ، وممكن بعد ما يكبر الطفل يلاقوا عنده خلع ولادة ،

... Cast diagnosis نفس الـ diagnosis تعاون الـ Cast**

*The most important complication of traction is DVT>>capillary refill والـ 6p's assessment نعمل لازم نضل

*Principles of effectiveness of fracture:-

1. Continues.
2. Don't remove the wt.
3. Wt hang free.
4. Keep it in midline position.
5. Robs must be unobstructed → ولا عقدة

Medication administration and calculation

***Medications:** - is a chemical substance [natural or synthesis] which given to pt in order to:
→ Treatment of illness – disease, →diagnosis of the problem, → prevent the illness
مثل المطاعيم

*from where you can get the pt's medication name in the hospital?!

-In Prince Basma hospital → in the green sheet in the pt's file.

-In KAUH → medication sheet.

Dr. order الورقة الخضراء تكون تفريغ الممرضين .. للتأكيد بنختار الورقة الزهرية يكون فيها الـ
بنفتح من الورااء للأمام .. آخر order

MAR [medication administration record] ← أو من خلال

* أهم اشياء عنا الـ Dr. Order الذي يكون بيحتوي على:

Dr Signature – Date – Time – pt's name – Medication's name – Dose – frequency – route

8 rights	
5 rights from Dr. order	3 rights الهم علاقة بالمريض
1. Right pt's name [file, ID, MAR, medication sheet] بناخده رباعي	1. Right to know everything about medication.
2. Right medication name (generic name) يجب التعامل مع الاسم العلمي.	2. Right to refuse [accept or ignore the medication].
3. Right dose.	3. Right to documentation [NOT WRITTEN NOT DONE].
4. Right time and frequency.	
5. Right route. وكمان ما ننسى الـ right diluted اذا كان الدواء بحاجة انه نحله قبل اعطائه.	

***There are 4 types for frequency...:-**

1. Routine [standing order] → D/C order شغال لحتى يحكي الدكتور D/C

2. On call → on the time only → مثال عليه يعني → لمرضى العمليات

3. State → immediately and once a time → order بيتنفذ حالاً ومرة وحدة → Hypoglycemia عنده يعطوه D10

4. PRN → as needed. [Pain & Fever – hypotension] مثل عشان يكون الـ order دقيق وضح، لازم يكون مقترن بسبب معين

Time interval و لازم يكون عنّا

← perfalgan, Ig, IV, Q 8 hrs, PRN-: اذا كان عنّا هاد المثال

* ممنوع انه يعطى الدواء حتى لو المريض بده بدون ما يكون مر عليه الوقت الكافي كل 8 ساعات.

****Right Time and frequency للاختصارات معروفة**

BID → twice a day / ×2 / Q 12 hrs

TID → three times a day / x3 / Q 8 hrs

QID → four times a day / x4 / Q 6 hrs

QD → everyday مرة باليوم

QOD / EOD → every other day يوم بعد يوم

Q am / Om → at morning – every morning

On → every night

state → immediately and once a day

AC → before meal

BC → after meal

HS → hour of sleep

ABT → at bed time

PRN → as needed

**Rout of administration للاختصارات :-

>Enteral [through GIT]:

1. PO → Per Oral [per Os]:-

cap – capsules / tab – tablet / susp – suspension / S/L – sublingual, buccal / Liq – liquid / syr – syrup.

2. PR → Per Rectal – supp اختصارها suppository مثل التحاميل.

3. PV → Per vaginal.

4. Top → Topical – ointment مثل ال.

5. Inh → Inhalation. OD – right eye, OS – left eye, OU – both

6. Drop → drops
AD – right ear, AS – left ear, AU – both

7. Nebulizer تبخيرة.

>Parenteral [outside GIT]:

IV → intravenous – IM → intramuscular – SC → subcutaneous – ID → intradermal

*مصطلحات مكتوبة على ورقة إعطاء الأدوية:-

D/C → discontinue [انقطع عن اعطاء الدواء تماما]

hold → انقطع عن اعطاء الدواء لفترة قصيرة

resuming → رجعت أعطي الدواء

* بعض النوات التي لازم نعرف من خلالها أهمية الdilution :-

1. Tiname → cc 100 يعمل acute renal failure اذا انعطى push لازم أقل شي ينحل بـ 100 cc

2. Ventoline → Tachycardia يعمل

3. Lasix → hypokalemia + hypotension يعمل

Abbreviations for units:-

ml=cc , L=liter , 1 ml=20 drops , gtt=drop

g=gm=gram , mcg=microgram , kg=kilogram

Ib=bound – 1 bound=0.45 kg

tbsp=15 cc [table spoon full] , tsp=5 cc [tea spoon full]

*التحويل بين الوحدات:-

. kg=1000 g – g=1000 mg – mg=1000 mcg

من الكبير للصغير بضرب .. من الصغير للكبير بقسم

. L=1000 ml

. Insulin + heparin → IU [International Unit] وحدتهم

كل 100 IU بتنحل بـ 1 مل

*عشان نقدر نعرف الdose المناسبة اللي بي أعطيها للPt لازم نمشي على هاي المعادلة :-

$$\frac{D.D}{D.H} \times V$$

أو ممكن على قانون النسبة والتناسب

D.D → desire dose (dr. order من ال)

D.H → dose in hand (stock dose) المتوفرة معي

V → volume – dilution وهون لازم ننتبه اذا لازم نعمل

..In general → ampoule – Vial , هاي ما بدها حل –

1 cc ← 100 mg كل dilution هو :-

يعني كل 1 g ← 10 cc

أهم Antibiotic نتأكد انه

حليناه هو Vancomycin

وأقل شي لازم يمشي

على 100 cc/hr.

Removing medication from ampoule and vial:

***Ampoule**:- glass container for single dose, has a neck

ويكون فيها The weakest point بنكسرهما من خلالها .. بس قبل هيك لازم نعمل Taping عشان كل الدوا ينزل لتحت الneck.

***Vial**:- glass container with rubber sealing, multi-dose. Syringe يدخل للداخل فيها غطاء عشان ال

*لأنها multi-dose لازم كل مرة بدنا نستخدمها نمسح بالswap منطقة الRubber sealing.

*أول ما ناخذ الDr order لازم نتأكد من الcomponents بعدين بنعمل check على ال expiry date لل medication وإذا هو

injectable أولاً يعني نتأكد من الroute اللي بتتوافر فيها، ومن خلال الroute والدose بنحدد نوع الsyringe اللي لازم نستخدمها
مثال: إذا كان الroute هو IM اذن بدنا Large syringe .

***equipments** → 1. Type of medication. 2. Solution to dilute the medication if it powder [N/S]

3. Syringe. 4. Sharp container. 5. Swap.

*Don't Forget to wash your hand before this procedure

*إذا كانت العلبة مفتوحة بحال الvial مثلاً .. لازم نمسحها بـswap

*it's very important to know how to handle the syringe :

Don't touch the plunger .. from down use your thumb , and to support use your index and middle

I.V medication administration

*It's the Fastest method for drug delivery

*يستخدم بحالات الemergency والurgency ويعتبر خطر في أوقات ما .. لذلك لهantidote.

***Method of IV medication:-**

1. Continuous infusion (large infusion) → with solution – rate و regulation بحساب

2. IV push/bolus → دفعة وحدة

3. Intermittent infusion (piggy back) محمولة → micro-dropper بحساب

– فش داعي نحسب الrate هون ما في regulation

- مهمين *5-steps

- check for canula → inspection: any redness, swelling – dry, clean – palpation: tenderness في بعدين إذا

وبتأكد انها مش out عن طريق الflush.

- give medication → إذا في أكثر من medication بين كل واحد بعمل flush للكانيوولا

*في حالة الinfusion → ما ننسى الIV set وال stand ونعمل عليهم Full assessment

Don't forget the termination of all procedure.

I.M preparation and administration

***First of all we should know what the meaning of I.M injection?**

I.M: injection in the skeletal muscle.

*Things should take care before I.M injection:-

1. Age of pt.
2. Size of muscle.
3. Type of medication.
4. Site of injection.
5. Viscosity of medication.
6. Integrity of the muscle.

***Site of injection:-**

1. Deltoid muscle.
2. Vastus laterals muscle (thigh).
3. Dorso glutial muscle (buttocks).
4. Ventro glutial muscle.

***How identify the site of each muscle??**

1- Deltoid muscle: put your fingers on the acromion process in the upper arm, then go down three fingers after that draw triangle, in the of it give the injection.

^Volume we can give it = 0.5-1 cc

2- Dorso glutial: in the upper outer surface of the buttocks and give injection laterally, don't give the injection medially, because the needle may strike the nerves (sciatic nerve), so it's not preferable.

^pt will be in semi-prone position.

^Volume = 3-5 cc.

3- Ventro glutial: Put the ulner aspect of the wrist on the greater trochanter of the femur, which the pouls of the hand attached to the skin and the thump on the gron, index on anterior-superior iliac supine, and the middle finger on iliac crest, after that the muscle will be in V-shape between index and middle finger.

^position: side lying, knee flex, hip flex.

^volume: 3-5 ml.

*Note: this muscle is more preferable than dorso glutial, because it's away from the nerves and blood vessels.

4- Vasrus lterales: in the anterior aspect of the thigh, put your hand above the knee and hand above greater trochanter, then the muscle appear between both hands.

^volume: 3 ml

^position: supine, slight flex of knee.

*Note: preferable for children.

#

- If pt obese the needle should be 1.5 inch.
- If pt thin the needle should be 0.5-1 inch.
- Viscose medication → choose 18-25 gage.
- aquaice medication → choose 25-30 gage.

#

The Angle of injection 90°.

(Z)-track method: pull down the skin, give the injection, after that remove needle and your hand to the skin → so the skin is more up-ward and cover the site of injection to be not seen again.

Why I should change the needle when I draw the medication from vial and when I give medication??

-Because the needle loses its sharpness.

***Procedure:-**

1. 5 steps: prepare equipment - provide privacy – explain procedure – hand washing and wear gloves – check Dr Order.
 2. Assessment:-
 - . Inspect the skin for redness, hotness, skin ulcer, pruritus, rashes, swelling.
 - . Assess the needle for expiry date.
- *Note: I.M injection is the only route you can leave 0.1-0.2 air in needle.
3. Make fold of skin.
 4. After the insertion of needle draw the plunger, if we found blood, immediately remove the needle → take another one → change the site.
 5. Give medication and remove fold of skin, wait 10 sec, remove the needle and then apply pressure smoothly for 30 sec or 1 min.

S.C preparation and administration

***Purpose:-**

1. If medication dose not given by other routes.
2. If medication is intermediate or shorter acting.
3. For the action of medication we give it S.C.
4. To prevent pt from further complication.

***Sites:-**

1. Abdomen (2.5 cm away from umbilicus) below the costal margin to groin area.
2. Outer upper arm (7.5 cm in the upper arm).
3. Outer thigh.
4. Back (upper surface).

*Note: keep away from area of BV or have bones.

***Procedure:-**

1. Assessment:
 - . Dr order – route – dose – frequency.
 - . Site of previous injection.
 - . Medication for storage place (insulin: in the freezer, heparin: in the room temp).
 - . Assess insulin needle cage (25-27).

2. 5 steps.

#equipment: needle, medication, gauze, gloves, medication sheet, sharp container.

3. If fatty tissue of the muscle is enough after make fold give the injection by 90°
4. But if the fatty tissue of the muscle is not enough give the injection by 45°
5. Apply gentle tapping without massage.

*Note: 1- Don't use alcohol swab because it increases (fast) absorption, while insulin is short action.
2- Don't massage the site of injection after procedure.

I.D preparation and administration

***Purpose:-**

1. For allergy test.
2. For pt with T.B (سل).
3. For some local anesthesia.


***Sites:-**

- 1- Inner aspect of the forearm – because it's wider, lighter color, less hair, and vessels away from each other.
- 2- Back between scapula.
- 3- Upper chest.

***Procedure:-**

- 1- Assess the site of injection.
 - 2- 5 steps – 5 rights of Pt.
- #use insulin syringe.
- 3- Draw 0.1 from diluted medication, and then dilute it again by 0.9 normal saline.
 - 4- Don't use alcohol swap (may cause sensitivity) – Use dry cotton.
 - 5- Stretch the skin for easily injection.
 - 6- Tell the pt that the procedure is painful.
 - 7- Give the medication by 10° until you see انتفاخ يشبه حبة العدس
 - 8- Make circle around site of injection, and write Time + medication name.
 - 9- Sensitivity test wait for 15 min – T.B wait for 72 hr.
 - 10- Look for any rashes or redness (locally).
 - 11- Look for the pt S&S of anaphylactic shock.

***Note:** Take witness for you (Dr, Nurse) for legal aspect.



ابذر الخير .. ونم ..
تدغدغك عند الصبح ثماره
(محمد احمد الراشد)

<http://www.facebook.com/healing.nursing>

Forgive us For any mistakes :)

لجنة التمريض .. Healing Group .. فكرة تحياً على نبض قلوبكم ..