مستشفى الملك فيصل التخصصي ومركز الأبحاث
King Faisal Specialist Hospital & Research Centre
Gen. Org. مؤسسة عامة

Patient Safety
A!ert
"Let's share the lessons learned"
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SAFE ADMINISTRATION OF HEPARIN"heparin protocol"

What is heparin?

Heparin is a high alert medication that is used to prevent blood clots from forming in people who have certain medical conditions or who are undergoing certain medical procedures that increase the chance that clots will form.
Heparin anticoagulation therapy requires careful dosing. Administering the wrong dose of heparin could be lethal.
Patient receiving heparin may follow different protocol based on different criteria according to : Indication of the heparin usage, patient age and patient risk of bleeding.

Type of protocols used in KFSH&RC:

Adult weight-based heparin protocol:

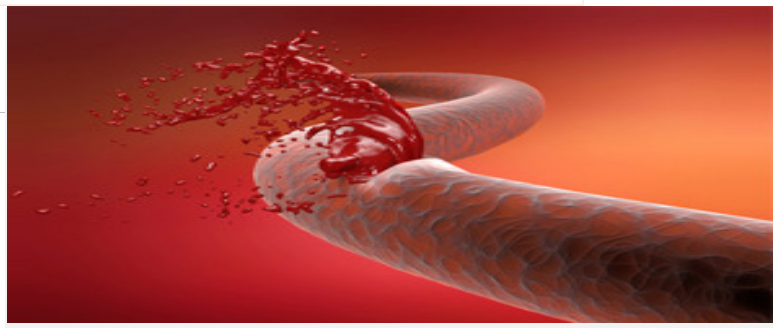
- **Low dose heparin protocol.**
- **High dose heparin protocol.**

Real incident caused by wrong heparin administration at KFSH&RC:

August 2015: 81 Year old lady on IV heparin protocol for atrial fibrillation. Patient was on high dose protocol and developed refractory shock with sever lactic acidosis. Patient deteriorated due to hypovolemic hemorrhagic shock. Patient was not monitored and dose was not adjusted appropriately. Subsequently patient passed away.

The International Patient Safety Goals:

- ⇒ **Goal 1 - Identify Patients Correctly**
- ⇒ **Goal 2 - Improve Effective Communication**
- ⇒ **Goal 3 - Improve the safety of high-Alert Medications**
- ⇒ **Goal 4 - Ensure correct Site, Correct Procedure, Correct patient Surgery**
- ⇒ **Goal 5 - Reduce Risk of Health Care-Associates Infections**
- ⇒ **Goal 6 - Reduce the Risk of Patient Harm resulting from Fall**



To ensure safe administration of heparin

Physician role:

- ♦ Make full patient assessment and choose **the appropriate protocol**
- ♦ Prescribe the initial and maintenance dose based on the chosen heparin protocol.
- ♦ Request anticoagulation test for monitoring.
- ♦ Accept and take action if critical lab result founded .

Nurses role:

- ♦ Become familiar with heparin protocol type .
- ♦ Adjust the heparin dose according to the chosen protocol based on the PTT ratio result .
- ♦ Receive and document any critical lab result from lab .
- ♦ Notify physician in case of :

⇒ Any sign of bleeding from any source
⇒ Sudden severe headache
⇒ Sudden nausea+ vomiting
⇒ Sudden change in patient level of consciousness .
⇒ PTT ratio > 3 .

Clinical pharmacist's role:

- ♦ Ensure the right protocol prescribed by physician .
- ♦ Ensure that the dose adjusted correctly base on PTT ratio result.

Lab staffs role:

- ♦ Communicate all critical lab result and document this communications in ICIS .

MANAGING EDITOR
AKRAM BASHAIREH
QMD– PATIENT SAFETY SPECIALIST
EXT 37757-MCD 47838

For more information contact,
RANA ALKATEB
QMD- PATIENT SAFETY ANALYST
EXT36835-MCD46612