Care for Plastered Limbs

**Definition:** Plaster is a means of immobilizing an injured limb. Its purpose is to immobilize the limb in a specific position by applying uniform pressure to the soft tissues, immobilizing the fractures, correcting the deformity of the limb, and supporting weak joints.

**Types of plaster:** The type and thickness of the plaster is determined by the position in which the member is to be placed. Usually the top and bottom joint of the injured area should be placed inside the plaster.

**Plaster mold (Plaster):**

This type of plaster is flexible and takes the shape of a limb well. By wetting the plaster strips, a kind of crystallization reaction occurs which is accompanied by heat production and causes the plaster mold to harden. Cold water should be used to prevent the patient from being disturbed by heat generated and it should be placed in the air after plastering. For plastering, the palm of the hand should be used to shape it so that it does indent. Because the indentation and bulge on the skin puts pressure under the plaster. Plaster usually takes 24 to 72 hours to dry. Unlike wet gypsum, which is cloudy and has a moldy odor, dried plaster mold is bright white and odorless.

**Non-plaster mold (fiberglass):**

This type of plaster is made of polyurethane and while having flexibility, it has less weight, more strength, water resistance and longer life. This plaster finds its maximum strength within a few minutes after molding. This plaster can be dried after wetting with a hair dryer.

**Nursing care after Plastering:**

- Evaluating pain by asking the exact location of pain, severity, quality and type of pain
- Relieving pain by holding the limb high and using cold compresses and painkillers
- The pain caused by the fracture is relieved by immobilizing the limb and the pain caused by the edema is relieved by holding up and holding a cold compress.
- Informing your doctor if there is any pain that has not been relieved by the mentioned methods because it may indicate complications of the plaster (compartment).
- Controlling neuro-vascular status (V.N) (vascular filling and capillary filling (press a nail, it should turn pink again in less than 3 seconds)
- Exposing the plaster to air until it is completely dry, observing the correct position of the limbs to prevent deformation of fresh plaster
- Explaining to the patient not to wet or cut the plaster
- Encouraging the patient to take care of themselves and helping maintain their independence in this regard
- It is recommending to use clothes suitable for limbs with plaster (clothes with wide sleeves or heels)

**Complications of plaster molds:**

- **Compartment syndrome:** The cause is insufficient blood circulation and nerve pressure following edema, and if it occurs, the plaster should be cut in half and the limb should not
be above body level. If the pain is not relieved, a fasciotomy is performed. The nurse should record neurovascular reactions and report any changes to the physician immediately.

- **Pressure ulcer**: It is caused by improper closing of the brace or pressure of the plaster on the soft tissue. The nurse should control the patient for pressure sores and inform the physician of symptoms such as pain and stiffness, warm area, plaster staining, and unpleasant odor.

- **Non-use syndrome**: Immobility in a plaster, brace or splint can cause muscle atrophy and loss of strength. The nurse should train the patient isometric exercises (muscle contraction). Muscle contraction by using electrical stimulation takes 8 hours a day to prevent tissue atrophy.

- **Plaster mold syndrome**: In plaster molds, this syndrome may be caused by obstruction of the third part of the duodenum due to contraction of the upper mesenteric arteries. The nurse should monitor the patient for the risk of plaster mold syndrome, monitor intestine sounds every 4-8 hours and report bloating, nausea, and vomiting.

**Removing plastering mold:**

A mold cutter is used to remove the mold. The patient must be reassured that the sow will not damage his/her tissue in advance. While cutting the plaster, take appropriate measure to protect the patient's eye against plaster pollen.

If you have any questions or ambiguities, call the following number:

023-33437824, Surgical ward of Kosar Hospital