Hospital Name **ORTHOPAEDIC SKELETAL TRACTION POLICY**

Policy Statement

The application and supervision of skeletal traction in patients at Hospital Name spans all levels of licensed practitioners. It is through a collaborative effort and ongoing education that all medical personnel be aware and knowledgeable about their abilities and responsibilities when it comes to skeletal traction.

Purpose

The policy is to provide guidelines for the care of the patients in skeletal traction. In addition, the policy is to instill confident in the usage of traction and to reduce complications and injuries.

Scope

The policy covers appropriate responsibilities of licensed medical personnel who have been appropriately trained for their position-specific interactions with skeletal traction.

Definitions

Skeletal Traction: one of the two basic kinds of traction used in orthopaedics for the treatment of fractured bones and the correction of orthopaedic abnormalities. It is applied to the affected structure by having a metal pin or wire inserted into the structure which is then subsequently attached to traction ropes. It is often used when continuous traction is desired to immobilize, position, and align a fractured bone properly during the healing process.

Equipment

Contact orthopaedic floor nurse to obtain needed traction equipment (after hours, contact the orthopaedic floor charge nurse). Contact via direct page or through the hospital operator to the orthopaedic floor nurse or orthopaedic charge nurse.

Procedure

Initial application of skeletal traction:

- Verify physician order for skeletal traction and amount of weight to be applied.
- Perform baseline patient neurovascular/neurological status prior to application of traction.
- Nurses responsible for the set-up of hospital bed traction frame and for proper patient positioning during application of traction.
- Perform patient neurological and vascular assessment soon after application of traction to assess for any changes.
- Explain to patient and family purpose of traction and patient responsibilities related to the traction.

Daily care and monitoring:

- Assess neurological and vascular status and report any changes to the physician.
    - Frequency of assessment is at a minimum of every 12 hours; however frequency should be based upon patient condition, nursing judgment and physician order.
- Assess traction set up:
    - Check the amount of weight to be applied as the traction force.
    - Ensure that all weights are hanging freely and that ropes/knots are secure.
- Check to assure that proper alignment is present (established line of pull is correct).
    - Assess for presence of countertraction.
        - Countertraction is a force pulling in the opposite direction of the traction. Most often, countertraction is provided by the weight of the patient's body.
- Assess patient's skin carefully for signs of pressure, irritation or breakdown (special attention to bony prominences and areas where traction apparatus may be in contact with the skin).
    - Reposition at every 2 hours, while being cautious to maintain alignment.
    - Encourage use of trapeze (unless contraindicated due to upper extremity or spine injuries). Do

not use a trapeze for patients with cervical traction.
- Utilize interventions to prevent complications associated with immobility (e.g., deep vein thrombosis, respiratory compromise, constipation, skin breakdown).
- If mechanical traction is released for readjustment, manual traction is to be applied.

Education

- All nurses are responsible for successfully completing competency training for:
    1. Off-floor transport with nurse escort (ie. to radiology department), including limb stabilization (ie. manual traction)
    2. Hospital bed traction frame assembly and maintenance
    3. Application and removal of weight for traction
    4. Pin care
- Confirmation of completed competencies to be present in RN orientation/training file.
    1. This applied to all new nursing hires and orthopaedic floor nurses.
        - Float and resource nurses are excluded from care of patients in skeletal traction.
    2. No recertification training needed once originally completed.

Additional Guidelines

- Lower extremity skeletal traction – accomplished by surgically inserting metal wires/pins through the femur or tibia. Skeletal traction exerts a longitudinal pull, as well as providing rotational control.
    - Perform skeletal wire/pin care with chlorhexidine 2mg/mL solution/swabs every 12 hours or as directed by physician order.
    - Be alert to risk of osteomyelitis and report any signs of infection to the physician promptly.
    - Check the position of the involved lower extremity to assure that pressure is not being placed on the heel or any other susceptible area.
- The attending physician and/or on-call orthopaedic resident will determine when skeletal traction should be utilized and will apply pin placement appropriately.
- Appropriate placement includes that the physician/resident obtains a post-pin radiograph to confirm that the pin/wire is in satisfactory position and available to be used.
- The trauma bay/ER nurse is responsible to include in their report to the floor/critical care nurse the presence of a traction pin.
- The physician/resident is responsible to include in the H&P/Consult note that the skeletal traction pin is approved for use and how much weight should be applied to the pulley system.
- All medical personnel are responsible for maintaining vigilance of the skeletal traction and look for any potential complications, including but not limited to, pin site infection and pressure ulcers.
- All comments, issues, questions or concerns regarding skeletal traction should be addressed to the patient's attending physician and/or the on-call orthopaedic resident.

References

Gosling T, Giannoudis PV. Femoral Shaft Fractures. In: Browner BD, Jupiter JB, Krettek C. Skeletal Trauma, Basic Science, Management and Reconstruction. 5th ed. Philadelphia, PA: Elsevier/Saunders; 2015:1787-1821.

Handoll HH, Queally JM, Parker MJ. Pre-operative traction for hip fractures in adults. Cochrane Database Syst Rev. 2011;(12):CD000168.

Matullo KS, Gangavalli A, Nwachuku C. Review of Lower Extremity Traction in Current Orthopaedic Trauma. J Am Acad Orthop Surg. 2016;24(9):600-6