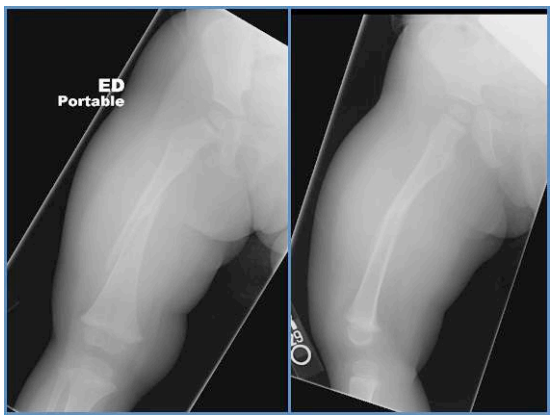
Treatment Algorithm/Technique Guide:
Application of Hip Spica Cast

Indications
Common Indications
-Femoral shaft fractures in young children (6 months - 5 years)



-Adjunctive stabilization of pediatric hip fractures after cannulated screw fixation
Maintenance of closed or open reduction of developmental dyplasia of the hip (Usually children 6 months – 2 years)

-Adjunctive stabilization of acetabular or proximal femoral osteotomies

MATERIALS NEEDED
-Pediatric Spica Table w/ wide butt support. Groin post not needed (no extra padding/perineal post needed)

-Pediatric gore-tex liner

-Felt (1/8 inch best, if 1/4 inch is only option, delaminate to 1/8)

-Cast cart (2, 3 &4 inch fiberglass rolls necessary)

-2-4 inch cloth tape for petalling, scissors

SETUP

-Setup up OR table so C-Arm can get underneath. Remove proximal extension so that the anesthesiologist does not have a far reach to get airway. Holder will be standing at the table end. (See below).

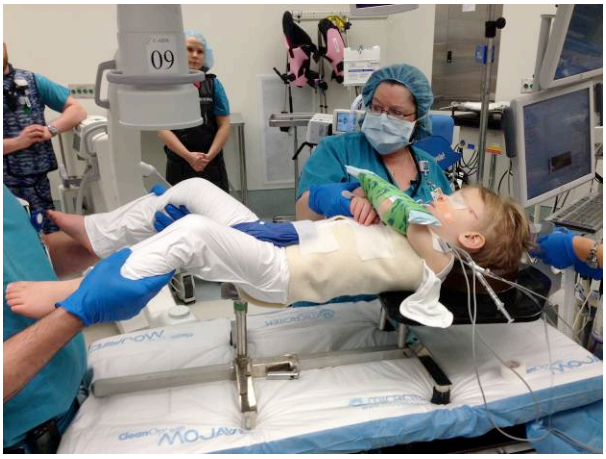
PREPARATION FOR CASTING PRIOR TO PLACEMENT ON THE SPICA TABLE

-Place gore tex liner on patient

-Wrap approx felt around pelvis, extending from bottom of the ribs to below the coccyx. Trim the front to allow unimpeded hip flexion and abduction. Posteriorly, the flap must protect the sacrum.

-Secure wrapped felt with tape.

-Place a blue folded towel in the groin, extending from sacral felt to umbilicus.



-**Position patient on spica table (as shown)**- nurse to hold arms across chest; anesthesia to secure airway. Holder at end of table.

-Apply 3-4 inch webril cast padding to cover all areas NOT protected w/ felt. Using figure 8 rolling technique to cover the groin and upper thigh. Continue this along bilateral thighs. Apply padding all the way down to ankle or foot on the fractured extremity.

CASTING:

-Femoral shaft fractures: Postion for holding patients fractured extremity depends on fx location. Bring the distal fragment to the proximal. For mid shaft fx: 10 thigh ER, 45 hip flexion, 35 abduction; 70-80 degrees knee flexion.

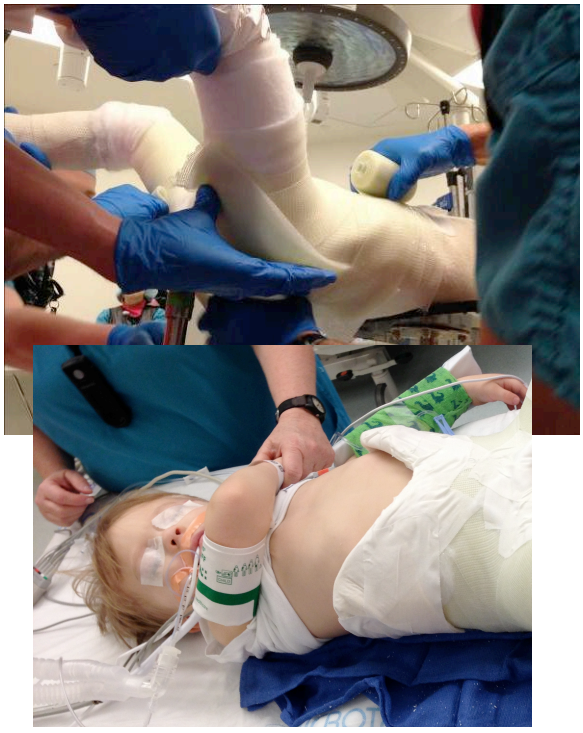
-Apply an short leg cast on fractured side and allow to set. This will be your traction handle.

-Apply 3 or 4 inch fiberglass around torso and thigh (spica) to span the top of the short leg cast. Set molds and check image.

-In the popliteal fossa, be careful to ensure that the full width of fiberglass covers the fossa (prevent sharp edges).
  -Leave 2 cm of felt exposed over the top.
-Use figure of 8 rolling technique to cover pelvis and uninjured thigh (to level of the knee).

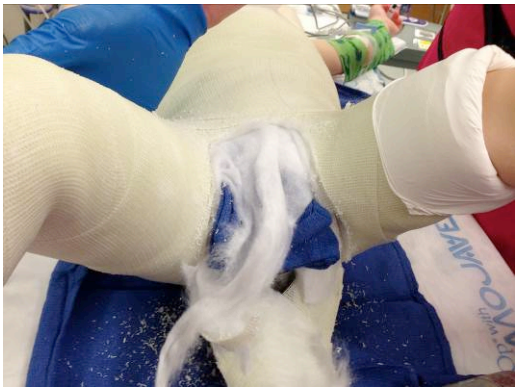
-Reinforce weak areas as necessary, incorporating fiberglass splints (interns Triangle!).

-Confirm reduction with fluoroscopy. When satisfied; trim and petal cast.



-Cast cutout: Anterior-superior: curved cutout extending down to above the umbilicus.

-Cast cutout: Make a generous window in the perineal area to thoroughly expose the genitals and the anus, up as high at the coccyx posteriorly.



-The posterior cuts will require the patient to be moved to a lateral position on each side respectively with coordination with anesthesia

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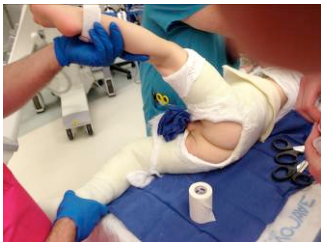

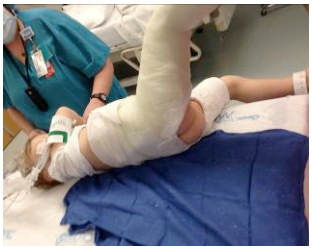

-Fold the gortex, felt and cast padding back over the edge of the cast and hold in place with strips of CLOTH adhesive tape. 2 and 4 inch tape rolls are easiest to use.