

A Simple, Safe And Inexpensive Way To Apply Hip Spica Casts in Children

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Introduction

When a spica cast has to be applied on a child following an operation on the hip the child has to be lifted off the operation table and placed on the spica table; this entails risks to the child from both the anesthetic and orthopedic stand points. Firstly, there is a risk that the

endotracheal tube may dislodge and secondly, the hip can dislocate while the child is being moved. Having encountered both these complications we devised a method of spica application without having to lift or move the child.

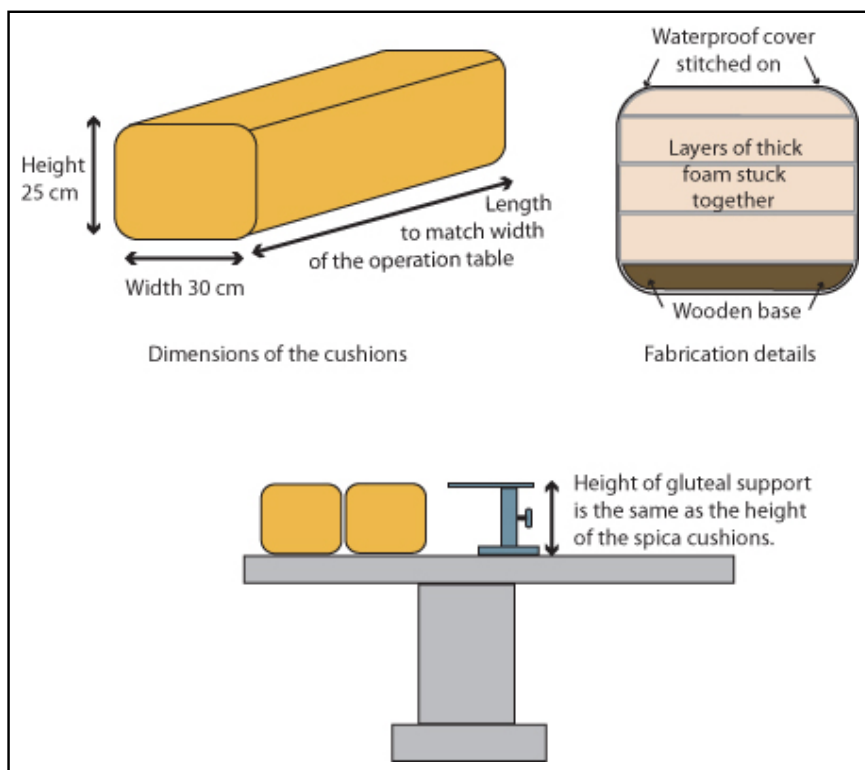


Fig 1. Setup Use these measurements to fabricate the cushions.

2 Tips and Techniques

Setup

Make a set of five cushions using the dimensions (Fig. 1). Position the cushions on the operating table as shown in the illustration and photograph (Fig. 2). The child is placed on these cushions and anaesthetized. Prior to commencement of the operation it is ensured that the child is positioned such that a point about 10 cm above the proposed upper limit of the spica overlies the interval between two adjacent cushions. Anesthetize the child on cushion (Fig. 3).



Fig. 2. Cushions on an operating table. A set of four (or five, if the child is tall) spica cushions are placed to support the child during the procedures.

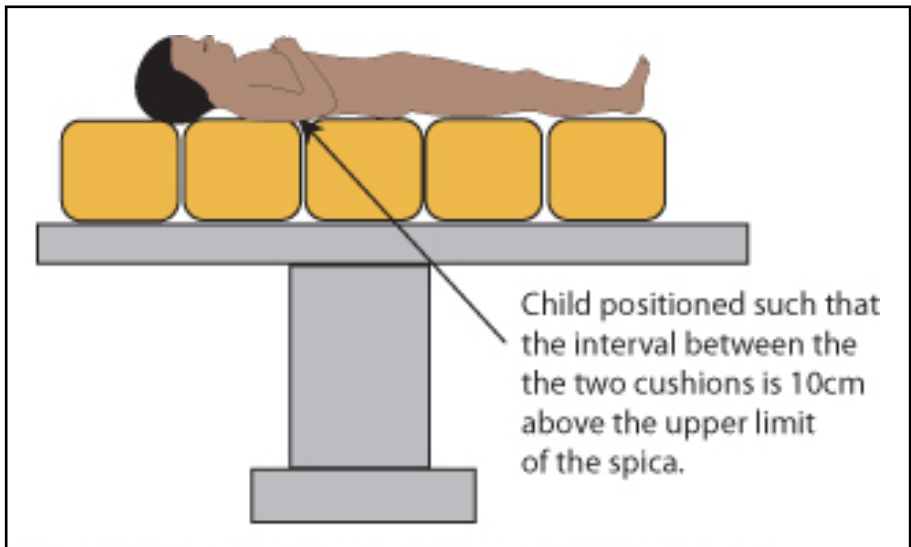


Fig. 3. Position of the cushions and the child during surgery.

3 Tips and Techniques

Procedure

A hip spica is routinely applied after closed or open reduction of the hip in children with developmental dysplasia of the hip (DDH), for femur fractures in children and following drainage of a septic hip. At the end of the procedure the pelvis of the child and the lower limbs are grasped firmly and the lower cushions are removed without moving the torso and head of the child (Fig. 4). The gluteal support is slid under the child to firmly support the buttocks. The lower limbs are held in the desired position and the spica cast is applied (Fig. 5).

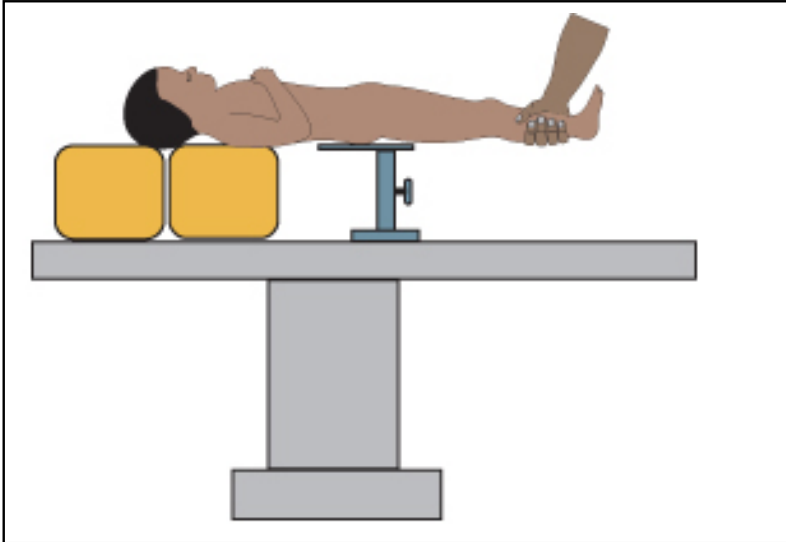


Fig. 4. Position of the cushions and the gluteal support during application of the spica cast.



Fig. 5. System in use. The child being positioned for the spica cast following an open reduction of the hip.