

Hip Toggle Procedure

The Hip Toggle is 2.0 or 3.0mm in diameter with an 'eye' to hold the suture made from stainless steel 316LVM. Use the adjustable drill guide to accurately place the hole in the femoral neck, (see chapter 7). All sterile packs contain a nylon Ormrod button for secure fixation of the suture. Available with monofilament nylon or braided LigaFiba.

LigaFiba is easier to work with, is stronger and ties better. However, it is a braided material with higher infection risks.

Braided polyethylene is 2.5 x stronger than monofilament nylon and has the additional benefit of a high resistance to abrasion. These properties are ideal for a hip toggle suture. Additionally the braided material conforms better and will therefore pass through a smaller hole. The new 2mm toggle and 150lb (68kg) will pass through a 2.5mm bone tunnel.

LigaFiba Hip Toggles

The hip toggle procedure is a well established technique for the management of traumatic and unstable subluxation of the coxo-femoral joint. Although somewhat invasive it does have the advantage that by replacing the round ligament the hip has, postoperatively, a full range of movement. However, the suture is placed into a very hostile abrasive environment and historically had a high failure rate. Newer materials have, to a degree, addressed this problem.

LigaFiba is spun Ultra High Molecular Weight Polyethylene. This is the same high wear material used for acetabular cups in Total Hip Replacement. For any given weight (or diameter) LigaFiba is 2.5 x stronger than the traditional monofilament nylon. In addition the softer more flexible nature of the material allows a relatively larger implant to be passed along bone tunnels. LigaFiba has in addition better wear characteristics than nylon. Veterinary Instrumentation is pleased to offer an updated range of hip toggles based on LigaFiba. The range includes the new 2.0mm toggle for small dogs and cats. Use of a dedicated introducer facilitates the introduction of the toggle through the acetabulum into the pelvis.

Notes on the use the Hip Toggle system

1. Expose femoral head and floor of acetabulum via a cranio-lateral approach. Perform a trochanteric osteotomy if necessary. The text 'An Atlas of Surgical Approaches to the Bones and Joints of the Dog and Cat' by Piermattei is an almost essential part of any veterinary surgeons library. CODE BK02 on our website or page 261 of the catalogue.

2. Clear soft tissues (mostly shredded round ligament) from acetabulum and fovea of femoral head.

3. Drill a hole through the acetabular fossa (effectively the origin of the round ligament).

Drill size required

3mm Toggle plus 250lb LigaFiba 4.5mm

3mm Toggle plus 80lb Nylon 4.8mm

2mm Toggle plus 150lb LigaFiba 2.7mm

4. Load the toggle into the insertion tool. The 'long' end goes into the inserter tip. The suture is retained onto the inserter shaft by sliding the silicone ring over the toggle and inserter.

5. Push projecting toggle into hole in acetabulum.

6. Insert plunger and eject toggle into pelvic canal. Toggle should 'flip' out preventing pull out. Check toggle security.

7. Drill a bone tunnel (2.5-3.5mm) from fovea exiting from proximal lateral femur.

a. Use Adjustable drill guide for best results.

b. 'eyeball' it

c. drill from fovea to femur (requires severe external rotation of femur)

8. Pass free suture ends down the femoral neck tunnel from fovea to femur. LigaFiba will require a suture puller or alternatively a folded loop of fine cerclage wire may be passed from lateral to medial to exit at the fovea. Pass the LigaFiba through the loop and pull back. Check there are no soft tissues (usually joint capsule) interposed between head and acetabulum.

9. Pass ends of the suture through holes in Ormrod button pull tight and tie temporarily. Check that coxo-femoral joint has a full range of movement. Tie securely over button. Over-tightening is a technical error and will result in premature failure of the suture.

NOTE: The implant always breaks within a few weeks of placement regardless of technique and material. The toggle provided temporary stability only. If it becomes necessary to remove the suture, locate the Ormrod button and remove both button and suture. It is not possible to retrieve the toggle which, lying extra-articularly, does not cause a problem.