Loop stitch technique for hamstring tendon grafts

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BACKGROUND

A hamstring graft needs to be secured adequately to a stitch to enable it to be drawn through bone tunnels and to be strong enough to allow graft tensioning. We present a quick, effective method of grasping a hamstring tendon using a loop stitch.

TECHNIQUE

A haemostat attached to the end of the tendon is passed through the loop of a size 1 Vicryl® stitch (VCP 1428, Ethicon, Somerville, NJ, US), keeping lengths of suture material each side of the tendon equal. The needle is passed down through the tendon (Fig 1) and the stitch is pulled tight. The two suture strands are then parted below the tendon to make a loop through which the tendon is passed. The needle is now again above the tendon in readiness to begin a second stitch.

This process is repeated until the end of the tendon is reached whereupon the suture is locked twice. Locking is achieved by passing

Figure 2 The completed sutured graft

the needle through the tendon and then the loop. The tendon end can be trimmed as necessary (Fig 2). The other end of the tendon can be prepared in the same fashion. This technique requires an assistant to hold the tendon taut during stitching.

DISCUSSION

We have used this technique for over 1,000 tendons. Double hamstring grafts can be sutured using the same technique by ensuring the needle passes through both tendons. We believe that once mastered, this is a useful technique for providing a strong suture lead for tendon grafts.

Figure 1 The technique starts from the middle of the tendon and works towards the end, with sufficient travel distance between each stitch.

A technique for avoiding notching of the anterior femur in total knee arthroplasty

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There is debate as to whether a notching of the anterior femoral condyle in total knee arthroplasty is of clinical significance.^{1–4} Nevertheless, sharp edges greater than 3mm are generally avoided to lessen the risk of supracondylar fracture. We describe a procedure that avoids sharp edges, requires no new equipment and no more significant time than routine cuts.

The medial anterior condyle is cut first. This side is never notched because of its smaller size and the external rotation of the femoral jig but it allows evaluation of the lateral side. If there is potential for notching, the saw blade power is turned off and resection is performed by manual side-to-side movement. The flexibility of the blade with the power off forces it upwards, thereby leaving a smooth anterior edge.

References

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