

How Do We Simplify Tension Band Wiring Patella

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INTRODUCTION:

Patella is the largest sesamoid bone in human body. Current gold standard treatment utilizes figures of eight techniques of tension band wiring. This technique is skill demanding and often leads to difficulty for young surgeons. We are sharing our modified method to achieve the same metalwork configuration as the figure-of-eight method by AO.

REPORT:

Step by step of modified method tension band wiring

1. Patient in supine position with knee flexed 30 degrees.
2. Midaxial longitudinal approach is used.
3. Fracture is reduced and two 1.6mm Kirchner wires are placed parallel to each other about 5mm from the anterior articular surface of patella.
4. Two 1.0-1.2 mm cerclage wires prepared with each of them are 10 cm and 15cm long.
5. Insert first 10 cm wire perpendicular to quadriceps tendon at level superior pole of patella posterior to k wire.
6. Insert second 15cm wire perpendicular to patella tendon at the level of inferior pole patella posterior to k wire.
7. Holding inferior wire and cross folding the wire to superior wire across the fracture site.
8. Twist perpendicularly inferior left hand wire to superior right hand wire and inferior right hand wire to superior left hand wire.
9. Decide the placement for the k wire crossing.
10. Twist both ends of the wire tightly, simultaneous with a surgical assistant for 5-6 equal spiral loops.
11. Cut remaining extra prominent wire and embedded at side of patella bone.

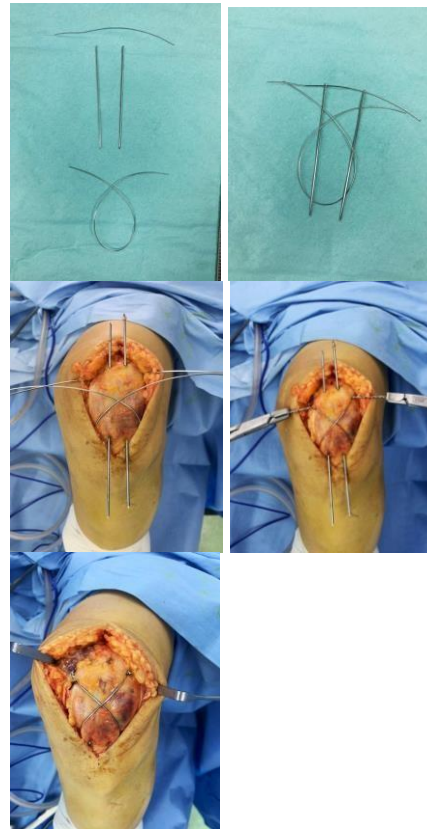


Figure 1: The above images showed our modified method of tension band patella.

CONCLUSION:

Fixation of transverse patella fracture is easier using our modified method. This will reduce time of surgery, better soft tissue handling and make placement of wire crossing much easier to control to further strengthen the tension band construct.

REFERENCES:

1. Gwinner et al.:Current concept review: Fracture of patella:GMS Interdisciplinary Plastic and Reconstructive Surgery DGPW 2016, Vol. 5
2. James C George et al.:Vertical and figure of eight fiber wiring for patella fractures:IJOS 2017;3(3):860-864