

## Paper #31

# Clinical Results Of Polyurethane Scaffold In Lateral Meniscus Segmental Defects

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### Summary:

repair of lateral meniscal defects using a novel biodegradable polyurethane scaffold

### Abstract:

Introduction : segmental tissue loss in lateral meniscus is associated with pain and increased risk of osteoarthritis.

Hypothesis : repairing the defect using a novel biodegradable scaffold is able to restore the knee function.

Materials and methods : a total of 54 patients (37 Males/17 females ; mean age 28 years (16 - 50),) were enrolled in a prospective multicenter study. All patients presented with post meniscectomy syndrome and segmental lateral meniscal loss, and were treated with a polyurethane biodegradable porous scaffold (Actifit® Orteq) implanted arthroscopically.

Clinical outcomes were assessed at 6, 12, and 24 months using Visual analog scale (VAS), International knee documentation committee score (IKDC), Knee injury and osteoarthritis outcome score (KOOS).

Results : A total of 7 relook arthroscopies were performed (7/54 [13%]) : 2 for torn scaffolds after 15 and 36 months, one separation of scaffold from native lateral meniscus at 15 months, 3 reinterventions for lateral meniscal tears after 6, 7 and 14 months and 1 for undiagnosed post op pain.

VAS decreased from 5,5 at baseline to 3,3 at 6 months , 2,8 at 12m and 1,9 at 24 months (n = 34) respectively. IKDC improved from 41 at baseline to 63, 58 and 70 at 6, 12 and 24 months (n = 26) respectively. All KOOS subscores improved between baseline and 24 months. KOOS Pain (71/6 months, 86/12 months, 80/24 months (n = 21) vs 57 at baseline) , KOOS symptoms (75/6 months, 83/12 months and 79/24 months (n = 21) vs 58 at baseline ) KOOS activities of daily living ( 81/6 months, 89/12 months, 85/24 months ( n = 21) vs 66 at baseline), KOOS sports (42/6 months, 57/12 months. 56/24 months (n = 21) vs 26 at baseline ), KOOS quality of life (47/6 months, 55/12 months, 57/24 months (n = 20) vs 29 at baseline).

Discussion : all patient outcome scores demonstrated a significant improvement in pain and function during the two years following implantation of the lateral polyurethane scaffold.

Conclusion : clinical outcome data 24 months after index surgery, demonstrates the lateral polyurethane scaffold is an effective treatment for patients presenting with post meniscectomy syndrome.