

*My Experience with the Artificial Ligament for
ACL Reconstruction*

Giuliano Cerulli MD,

*Full Professor Orthopaedics and Traumatology University of Perugia,
Perugia and Nicola's Foundation ONLUS, Rome, Italy*

In the second half of the '90's artificial ligaments were once again being considered for anterior cruciate ligament reconstruction. The new artificial ligament was looked upon with skepticism by most orthopaedics surgeons due to the bad experience in the '80's. In the years to follow, better knowledge of the causes of failure and an analysis of the literature lead us and other orthopedic surgeons to reconsider the possibility of using synthetic tissue as a graft. We started using the new generation synthetic ligament in ACL reconstruction in 2001 in well selected cases: subjects over 40 yrs old, symptomatic, motivated, needing fast recovery and with little time to spend on rehabilitation. In a second phase and in special cases, such as the chance of a lifetime or for personal motives, we reconstructed the ACL with the synthetic graft in patients under 40 yrs old. From March 2001 to date over 400 ACL reconstructions have been performed by our group.

We have evaluated the results of anterior cruciate ligament reconstruction with artificial ligaments at a five-year follow-up.

25 patients have undergone anterior cruciate ligaments reconstruction using synthetic tissue and the all-inside surgical technique. The operation was proposed to symptomatic, motivated subjects who needed quick recovery to return to sport or working activities.

For the individual clinical evaluation the *VAS*, *KOOS* and *IKDC* forms were used. An expert neutral "observer examiner" performed the objective clinical evaluation. The subject also had a biomechanical functional assessment: arthrometrical, isokinetics and stabilometrical.

The subjective clinical evaluation, resulting from the assessment forms used, shows positive results in over 90% of the cases. Similar results were observed following the objective clinical evaluation. The biomechanical evaluation showed excellent or good recovery in the majority of cases. The authors conclude that artificial ligaments are, in selected cases, a valid alternative to the autografts and allografts. In conclusion, based on our experience if the technique is well performed and the patient selection is accurately done we can assure the patients' outcome, which have to date shown to be positive in 95% of the cases. The artificial graft is fully biocompatible and in the near future it will be bioactive.