

Lars ACL Reconstruction on an Heavy Worker: A Case Report

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1. Introduction

A new generation of synthetic graft for ligament reconstruction has been proposed, in the last years of 1990s, introducing a new system (Ligament Advanced Reinforcement System) [1].

The Ligament Augmentation and Reconstruction System (LARS®) is a synthetic ligament consisting of fibres made of polyethylene terephthalate (Figure 1).

Commonly it is believed LARS device should be more indicated for acl reconstructions in patient who are old or with low functional needs.

Despite the LARS being used as an Anterior Cruciate Ligament (ACL) device for nearly 30 years and the well-documented complications from earlier synthetic ligament designs, there is a paucity of published medium- to long-term results. We present here a case report related to a male patient of 44 years old, who underwent ACL reconstruction with the use of LARS.



Figure 1:

2. Case Presentation

We present the case of a 44-year-old male patient affected by inveterate ACL lesion on right knee.

The patient, an heavy worker, reported an onset of knee instability and pain on right side during since 2016.

After a knee sprain he started to suffer this kind of instability and he underwent several orthopaedic controls among other hospitals and they performed x ray without evidence of any bone knee lesion.

He came to our attention in november 2017 complaining right knee instability and pain especially during his job activity, with severe limitation of his own activity [2, 3].

After medical check-up, with evidence of positive Lachman test and positive front drawer test, we decided to prescribe MRI exam.

Patient did this exam and there was confirmation of ACL complete lesion.

The patient needed an early recover and was quite worried even about postoperative period because he needed to return to work quickly.

So he was admitted to the hospital and he underwent surgical reconstruction of ACL adopting LARS device.

He underwent arthroscopy procedure with no evidence of cartilaginous or meniscal lesions and a surgical drainage was positioned.

He started physiotherapy according to protocol just few hours after surgery and then the patient continued it home with the help of a

physiotherapist.

After two days of hospitalization the patient was dismissed and started early rehabilitation path.

He had several follow- up controls and the last one was on october 2020.

The patient was back to his job after two months without any particular matter and he was able to kneel often without pain or subjective instability.

On our last check up he showed negative tests for ACL examination and he was able to perform also sport activities like playing football or running without pain.

We performed a new MRI exam on knee after one year from surgery and it showed and integrated structure of neolegament.

3. Discussion

Management of ACL reconstruction is always a challenge for knee surgeon.

Usually it is common believed that this technique is a suitable option of reconstruction for selected case like.

During the past 15 years, the development of biocompatible materials and a better understanding of the knee kinematics led to the development of a new generation of synthetic grafts.

In conclusion, even if the long-term results of the use of LARS are encouraging, the use of autologous grafts remain the gold standard in ACL reconstruction, especially in young people. LARS ligament can be considered a suitable option for ACL reconstruction in carefully selected cases, especially for older patients needing a fast functional recovery.

Moreover we avoid the pain connected to the pick- up site.

4. Conclusions

Based on these facts, it was described an interesting and particular case especially because of two main reasons: the age and functional needing of patient and the positive result of functional outcome.

Moreover the patient was able to have a fast and short recover and be back to work quickly.

So we believe ACL reconstruction using LARS can be a valid and effective technique, suitable not only for old patients and also for old people who do heavy works.

Of course it should be necessary to perform a more complete and wide study, involving more patients, more surgeons and more hospitals.

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