

Cellulose membranes and surgical procedures for tendon and ligament reconstruction

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Technology description

"That technique allow rapid, efficient and low-cost biological regeneration of damaged tissue."

Note

The technique consists of surgical reconstruction of ligaments and tendons. This procedure is easy to implement and ensures rapid, efficient, and low-cost treatment.

Question

Anterior cruciate ligament (ACL) injury is the most common knee injury. Cystic tissue, tension and ligament loss in joints and/or musculoskeletal tissues constitute an irreparable lesion through self-regeneration. Because these tissues cannot be renewed, grafts (autologous grafts) are chosen to be used closer or farther away from the injured person, but the onset of disease due to removal of these grafts or pain at the site of removal of the grafts are common complications of the use of this material. The use of citation-structured allografts or transplants has also been used in some hospitals, limiting the limited availability, as well as possible bacterial infections and even the spread of other infectious diseases, or possible immune responses in the host. The third and final treatment is synthetic prostheses, which, although approved by the FDA, are not recommended for primary ACL reconstruction because they fail in cases where fragments may eventually lead to arthritis and synovitis.

Proposed solutions

The present invention allows for a wide range of developments in the field of cystic, tensional and ligament damage repair. In the case of anterior cruciate ligament injuries of the knee, the techniques described allow for the biological regeneration of damaged tissues and the use of rapid, efficient, immediate and economical treatment in the repair of these injuries. The result is obtained without damage to musculoskeletal tissue, which occurs as an innovation in the past, that is, the addition of a new tissue to the organism without residual association with other structures.

Advantages

- promoting the regeneration of ligaments and tendons;
- use of biocompatible materials for any patient (to avoid immune rejection);
- use of biodegradable materials;

- Promoting rapid and effective treatment;
- Simple process at low cost.

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