

# Knee Osteoarthritis: Conservative or Surgical Treatment?



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## Short Communication

Osteoarthritis (OA) or gonarthrosis of the knee is a chronic disease with a high prevalence worldwide. As populations age, the number of affected increases, altering quality of life to varying degrees [1]. To determine the exact prevalence of knee OA, the definition of the disease used, the diagnostic method (clinical and/or imaging), and the affected joint are essential, for which reason the available data are diverse. Despite this, it is described that more than 50% of the population older than 65 years presents some type of OA, the most affected joint being the knee, with an incidence of 240/100,000 people/year [2]. This disease causes mechanical pain that is usually related to stiffness and progressively causes loss or decrease of joint function. As it is a condition that causes pain and progressive functional limitation, it is also a constant reason for medical consultation with the resulting high costs for care and treatment, a common factor detrimental to the lifestyle that affects the quality of life of the patient related to their health [3]. Among the recognized risk factors are age and female sex, while the genetic component has a low association with knee OA, unlike what occurs in other joints, such as the hips or hands. Weight changes have been consistently related to knee OA, with a relative risk of 2 for overweight people and 2.96 for obese people. New systemic risk factors have been recognized in recent years staking the metabolic syndrome; the presence of 2 of its components conditions a risk of knee OA of 2.3 times, while with 3 or more components the risk rises to 9.8 times [2].

Treating this disease has been difficult and it is not without side effects that can be dangerous. Due to its chronicity, it requires prolonged treatments that potentiate the collateral effects and raise costs. The management of OA has focused on modifying symptoms, predominantly pain relief. The appropriate strategy to repair damaged articular cartilage will need to act on multiple disease mechanisms. Despite promising research, to date there is no drug, whose effects have been confirmed by long-term studies, capable of modifying the structural damage of knee osteoarthritis [4]. Some authors advocate the application of conservative treatment to improve symptoms in patients suffering from this disease. Conservative treatment takes into account "non-pharmacological" and pharmacological methods of ambulatory management of OA, based mainly on lifestyle modifications, rehabilitation, footwear, orthoses, support devices, analgesics, "non-steroidal" anti-inflammatory drugs, chondroprotective agents, intra-articular steroid use and viscosupplementation [4,5]. All these treatments, although they produce clinical improvement in the patient, only produce short-term relief and require continuity of treatment for long periods, with the consequent production of adverse effects and complications. One of the problems common to all treatments is their limited long-term effect; According to the studies reviewed, there are no studies of effectiveness after more than six months [5].

Another variant of conservative treatment is the application of plasma rich in growth factors, in studies carried out by different

authors it was shown that it is an effective and safe procedure; with which only mild complications are recorded [1,5]. Before reaching a large and expensive surgical intervention, platelet-rich plasma is a treatment of choice in gonarthrosis for the improvement of symptoms, although it does not eliminate the disease. For the surgical management of knee OA, different methods are invoked, among which we can mention Arthroscopy with different techniques such as joint lavage, microfractures, osteophyte resection, synovectomy and chondroplasties [6]; With these procedures, clinical improvement of the patient can be achieved by delaying joint replacement. Another treatment option is Osteotomy, osteotomies at the knee level are indicated in those cases with varus or valgus deformities in which an overload is demonstrated in some of the compartments, and which are accompanied by symptoms. High tibial osteotomy can be a preventive procedure that seeks to prevent OA progression [6]. But this surgical technique has several limitations: the age of the patients must be less than 60 years, they must not be obese, they must have a knee flexion greater than 90° [7], the degree of involvement of the articular surfaces of the knee must be within the Alhåck classification [8] in type I, II and III and cannot suffer disabling degenerative diseases [7].

When the degree of involvement of the articular surfaces of the knee is IV and V-according to the aforementioned classification - the surgical indication is unicompartmental or total knee arthroplasty. This procedure makes patient care much more expensive, due to the complications it sometimes brings with it [6,7]. This procedure is reserved for those cases in which conservative measures or previous surgical treatments have failed to control the progression of the disease, nor the symptoms [6]. In recent years, studies by Chinese [9] and Cuban [10] specialists have published studies of the results of a new surgical technique called fibular ostectomy, which consists of a proximal fibular ostectomy (PPO) of approximately 2 centimeters, carried out carried out between 6 and 10 centimeters below the head of the fibula, in order to decompress the internal compartment in the painful genu varus and in this way relieve the patient's pain, improve the patient's function and gait with minimal resources and a faster recovery from it [10].

Surgical indications for performing PPO are the same as for osteotomy except for age and bone characteristics, since the osteotomy requires good bone quality from the patient, hence PPO is a useful variant in patients with OA of knee 60 years of age or older, which due to the age element is not feasible to perform the osteotomy [11], in the case of this new surgical technique, the

patient is incorporated in less than 24 hours after the surgical act, not requiring support with canes and with full support of the affected limb; no expenses are required for osteosynthesis or prosthesis material, which really makes this type of procedure more expensive to improve the patient's quality of life. The problems of care by the family and the complications that originate these types of procedures such as infections, breakage of the prosthesis or application of immobilization with a cast disappear, being a relief for the patient, the family and society [10]. The treatment option to be used in knee OA depends on the patient's symptoms and his physical conditions. The main goal of treatment is pain relief and functional improvement with the least possibility of complications. In this case, PPO is a good treatment option.

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