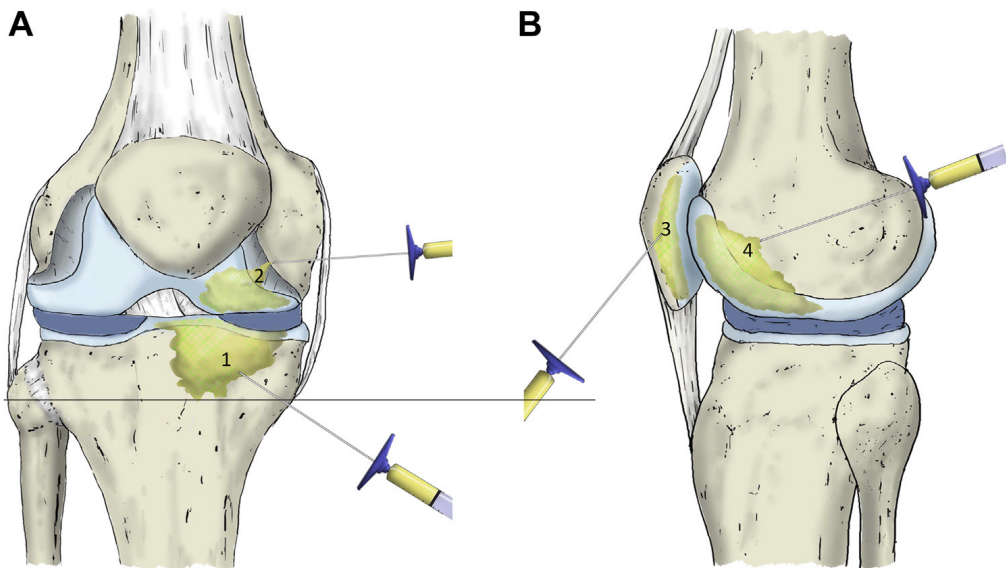


SEVERE KNEE OSTEOARTHRITIS

INTRAOSSEOUS INFILTRATION OF PLASMA RICH IN GROWTH FACTORS (PRGF) FOR SEVERE KNEE OSTEOARTHRITIS

SEVERE KNEE JOINT PATHOLOGY SHOULD BE APPROACHED FROM THE ARTICULAR CARTILAGE (SUPERFICIAL AND DEEP), THE SUBCHONDRAL BONE AND THE SYNOVIAL MEMBRANE



- (A) Intraosseous infiltration of a knee with severe tibiofemoral knee osteoarthritis is performed in the medial tibial plateau (1) and medial femoral condyle (2).
- (B) For patellofemoral osteoarthritis, the approach is external and the patella (3) and the trochlea (4) are infiltrated.

BEFORE INTRAOSSEOUS INFILTRATIONS, A CONVENTIONAL INTRA-ARTICULAR INFILTRATION OF PRGF IS PERFORMED

ABSTRACT

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Intraosseous Infiltration of Platelet-Rich Plasma for Severe Knee Osteoarthritis.

PURPOSE

We describe a new technique of platelet-rich plasma (PRP) infiltration for the treatment of severe knee osteoarthritis. PRP intra-articular infiltration is a promising treatment for knee osteoarthritis, but it still has some limitations in high-degree osteoarthritis. Diagnosis of osteoarthritis is based on clinical and radiographic findings, and patients with grade III or IV knee tibiofemoral osteoarthritis based on the Ahlbäck scale are considered candidates for this technique. The technique consists of performing intraosseous infiltration of PRP into the subchondral bone, which acts on this tissue and consequently on cartilage-bone communication. Although the intraosseous injection hinders the conventional knee intra articular infiltration, it allows an extension of the range of action of PRP, which acts directly on the subchondral bone, which is involved in the progression of osteoarthritis. Thus this technique involves a new administration of PRP that can delay knee arthroplasty; moreover, it can be applied for not only severe osteoarthritis but also other pathologies in which the subchondral bone is critical in the etiology, such as necrosis and osteochondral lesions.

TECHNIQUE

After the patient is positioned supine on the operating room table, **(A)** intra-articular infiltration is performed into the joint through the external patellar wing, centered in the central region of the patella in the cranio-caudal plane; **(B)** the infiltration is directed into the midpoint area of the femoropatellar region using an external approach and preventing infiltration into the synovial membrane (asterisk). **(C, D)** Intraosseous tibial plateau infiltration is conducted into the medial tibial plateau, just to its middle area. The arrow indicates the trocar. **(E, F)** Concerning intraosseous femoral condyle infiltration, a trocar (arrows) is applied to the thickness of the medial femoral condyle, as far as the middle area of the medial condyle.

