**Case report – CellColt®**

**Treatment of patellofemoral chondral lesion in the knee with autologous bone marrow aspirate**

**IDENTIFICATION**

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**CLINICAL CONDITION - PRE PROCEDURE**

**Identification**

Patient TRAAR, female, 53 years old, mother and amateur marathon runner, presents with pain in her right knee and right hip, preventing her from practicing sports.

**Disease History**

The patient refers to anterior pain in the knee and hip that started during a training cycle for a marathon. No lumbar complaints, no history of trauma.

**Physical exam**

Previous pain symptoms in the knee over the right femoropatellar joint, crepitation when flexing and extending the knee and pain when compressing the patella with minimal joint effusion.

In the hip, the patient had pain in the anterior region of the groin that worsened with prolonged orthostatism and after running training. Clinically, there was a small reduction in the range of hip flexion.

**Imaging exams**

Magnetic resonance imaging of the knee showing irregular patellofemoral chondral thinning predominantly on the patella with mild subchondral bone edema and infrapatellar fat edema.

Magnetic resonance imaging of the hip showing a slight bulge in the anterolateral contour of the femoral neck/head transition, a subchondral bone cyst in the anterosuperior portion of the acetabulum and a slight thinning of the articular cartilage.

Foto em preto e branco

Descrição gerada automaticamente com confiança baixa

Figure 1 – Nuclear Magnetic Resonance of the right knee and right hip.

**TREATMENT / PROCEDURE**

Bone marrow collection from the posterior iliac crest was performed. In this specific case, we used radioscopy as a guide tool for locating the collection point.

Foto preta e branca de relógio ao fundo

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Figure 2 – Location of the posterior iliac crest with the radioscopy equipment.

The collection was divided into small aspirations of 4 ml (totaling 20 ml) using CellColt for posterior and immediate joint infiltration of the right hip guided by ultrasound and right knee, both associated with hyaluronic acid.

Uma imagem contendo pessoa, no interior, segurando, olhando

Descrição gerada automaticamente

Figure 3 – Bone marrow collection procedure from the posterior iliac crest with CellColt®

Pessoa em frente a computador

Descrição gerada automaticamente

Figure 4 – Ultrasound guided hip joint infiltration and infiltration of the right knee with bone marrow aspirate associated with hyaluronic acid.

**POST PROCEDURE**

The patient was instructed to use simple analgesics (Paracetamol 750mg) only once dose 4 hours after the procedure and was referred to orthopedic physiotherapy/Rehabilitation sportive.

It evolves clinically with an improvement in pain symptoms, gradually returning to exercise training race.

**CONCLUSION**

Bone marrow aspirate (Bone Marrow Aspirate) is an autologous biological product that, in addition to containing a wide range of cytokines and growth factors, also contains small concentrations of multipotent cells: hematopoietic stem cells and mesenchymal stem cells. These combined elements act by modulating the inflammatory process and stimulating the regenerative process of joint structures.

For our patient above who has degenerative osteoarticular injuries resulting from sports practice, this treatment associated with good rehabilitation reduces painful symptoms, stimulates joint recovery and allows the return to sports practice.