

**Abstract CODE : A181**

**TYPE : ORAL PRESENTATION**

**CATEGORY : VASCULAR INTERVENTION**

## **TITLE**

Genicular artery embolization due to osteoarthritis of knee joint: Long-term result

## **BACKGROUND**

Genicular artery embolization (GAE) is a minimally invasive treatment to reduce pain in patients with knee osteoarthritis (OA). This study aimed to study the efficacy in patients with knee osteoarthritis.

## **METHODS**

Ten patients with mild to severe knee OA were enrolled in this retrospective study between November 2021 and August 2022. Baseline pain with visual analog scale (VAS), Wong-Baker Faces pain scale, and symptoms with Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) were evaluated for each patient at baseline. The outcome was assessed on the first day, 3 months, 6 months, and one year after the embolization using VAS, Wong-Baker Faces pain scale, and WOMAC score respectively.

## **RESULT**

The median age was 60 years old ranged 51 – 75 years old. The median BMI was 29.15 kg/m<sup>2</sup> (interquartile range (IQR), 24.12 – 31.32 kg/m<sup>2</sup>). There was a significant improvement in the pain and symptoms after the procedure and 1 month, 3 months, 6 months, and one year compared with scores obtained before the embolization (VAS,  $p < 0.004$ ; Wong-Baker Faces pain scale,  $p < 0.001$ ; WOMAC,  $p < 0.001$ ). The VAS score was found with 6.5 (IQR, 5.25 – 8.25) while the Wong-Baker Faces pain scale was 3 (IQR, 3.0 – 4.0) and WOMAC was 62.0 (IQR, 45.0 – 69.75) before the procedure. After the procedure, the genicular artery embolization significantly improved the pain and symptom scores as follows: VAS with 3 (IQR, 1.75 – 4.5), Wong-Baker Faces pain scale with 2 (IQR, 1 - 2) and WOMAC with 19.5 (IQR, 11.75 – 31.75). Even though, the results were slightly decreased from 1 month to 1 year as follows: VAS from 2 (IQR, 1 – 3.75) to 2 (IQR, 1.75 – 4.25), Wong-Baker Faces pain scale from 1 (IQR, 1 – 2.25) to 2 (IQR, 1.75 - 3), WOMAC from 27 (IQR, 9 – 37.5) to 27 (IQR, 13.75 – 36.25), we found that significant reduction of pain and symptoms occurred at 6 months after the procedure. No major adverse events or complications occurred in all patients.

## **CONCLUSIONS**

Genicular artery embolization is a safe procedure and significantly improves the pain and symptoms in patients with knee osteoarthritis.

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