Transarterial genicular artery embolization as treatment of chronic knee pain in patients with osteoarthritis

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Objective
To demonstrate the safety and efficacy of transcatheter arterial embolization for mild to moderate knee osteoarthritis that is resistant to conservative treatment

Methods
We share our initial experience of four cases
- Patients had moderate to severe medial knee pain (pain and total WOMAC* score) resistant to conservative therapy for at least 3 months
- Patients were assessed by conventional radiography and MRI
- Common femoral artery was punctured and percutaneous arterial access was obtained in an ipsilateral anterograde fashion
- Abnormal neovessels were identified within soft tissue surrounding knee joint in all cases by arteriography
- Embolization particles of 40-150 μm polyvinyl alcohol in two cases and 75 μm Embozene microspheres in other two cases were used
- Embolic agent was infused until hemostasis in pathological neovessels was achieved, the patients were discharged on the same day

Results
- The technical success rate was 100%, no major adverse events were related to the procedures
- Knee pain of treated patients significantly decreased 1 month after the procedure

Conclusions
Transcatheter arterial embolization was effective, minimally invasive and safe treatment option in patients with pain related to mild to moderate knee osteoarthritis refractory to traditional nonsurgical management

Key words
Genicular arteries, embolization, osteoarthritis