O2-O3 chemonucleolysis is one of the mini-invasive treatments for disk herniation. With this treatment, from 2003 to 2010, we obtained good results in 70-75% of patients treated for lumbar disk herniation. The aim of this study is to assess the therapeutic outcome of intradiscal injection of DiscoGel®, radiopaque gelified ethanol (Fig. 1), in patients who did not respond to the previous oxygen-ozone chemonucleolysis.

From December 2008 to January 2010, 32 patients, aged between 20 and 79 years, were treated by intradiscal injection of DiscoGel®. Patients had low back pain with positive signs of nerve root involvement, with or without paraesthesia or hypoesthesia, with appropriate dermatome distribution. Clinical symptoms were resistant to conservative management (drugs, physiotherapy and other) and did not respond to previous treatment with O2-O3 chemonucleolysis. Patients presented MR evidence of uncalcified disk herniation(s), in line with the patient's clinical symptoms.

Clinical outcome was assessed six months after treatment applying a modified MacNab method. Results have been evaluated using a questionnaire and direct patients interview.

Treatment was a success (back pain relief) in 24 out of 32 patients (75%), whereas it was deemed a failure (poor outcome - recourse to surgery) in the remaining 8 patients (25%).

No complications occurred in our patients.

Lumbar discal puncture was performed by extra-spinal lateral approach using a 22G x 17.78 cm BD spinal needle, under fluoroscopic guidance (Fig. 2). 50 disks in 32 patients were treated. DiscoGel® quantity injected in our series depended on the available disk space (from 0.5 ml to 1.3 ml).

50 discs in 32 Pts
19 pts: 1 discal level
8 pts: 2 discal levels
5 pts: 3 discal levels

Our experience of intradiscal DiscoGel® injection has been safe and effective. In our opinion, DiscoGel® intradiscal injection, because of its higher cost, is a useful treatment option to be considered when the O2-O3 chemonucleolysis fails, before recourse to surgery, or when surgery is not possible.