



Lumbar disk hernias: percutaneous treatment with DiscoGel® in patients who did not respond to oxygen-ozone chemonucleolysis

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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.



Fig.1) DiscoGel® Radiopaque Gelified Ethanol: a cellulose derivative product dissolved in ethyl alcohol to form a gel, to which a contrast agent (Tungsten/Tantal) has been added

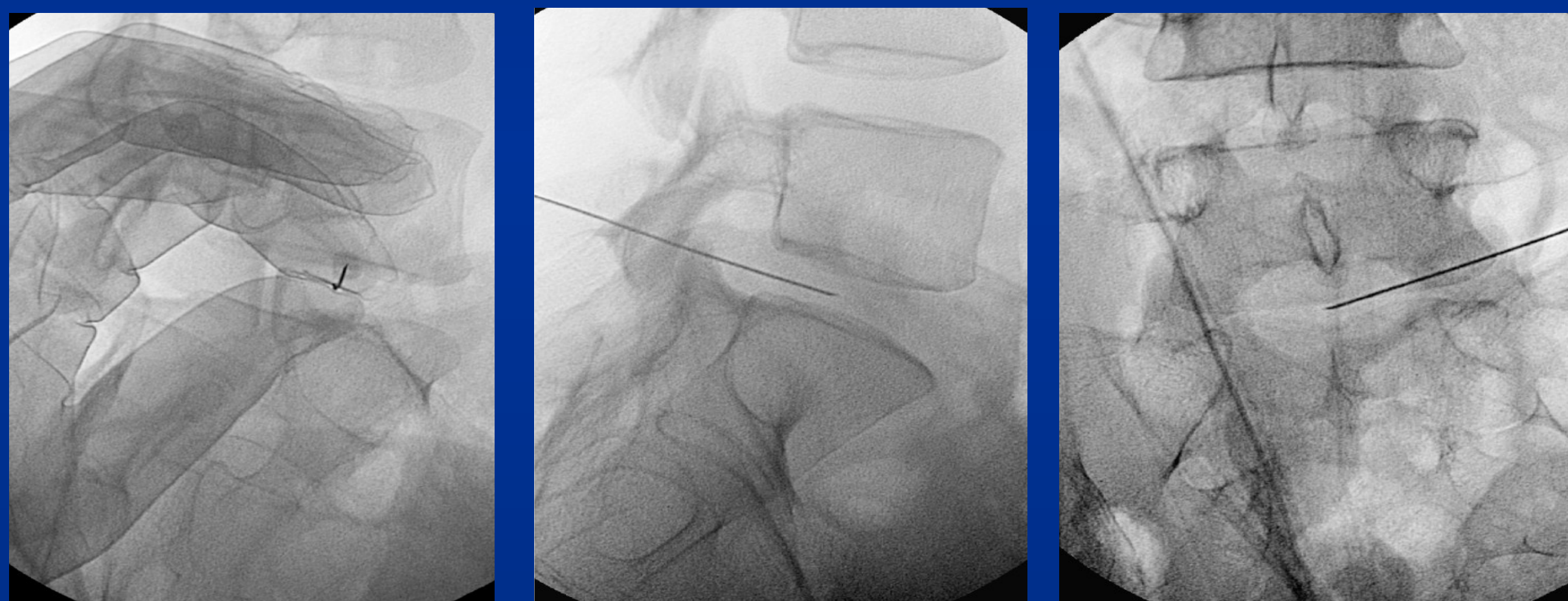


Fig.2) Lumbar discal puncture under fluoroscopic guidance

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

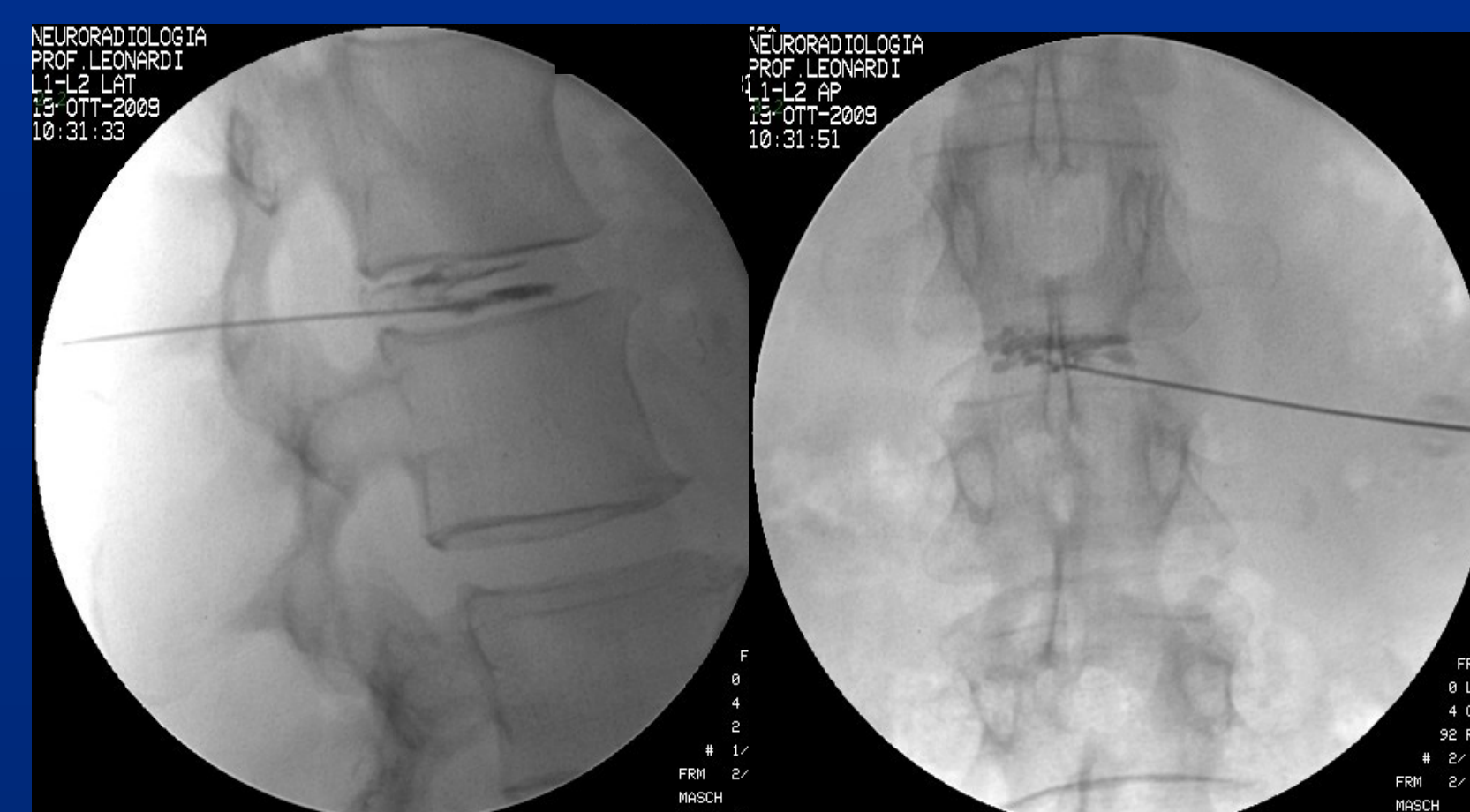
Treatment was a success (back pain relief) in 24 out of 32 patients (75%), whereas it was deemed a failure (poor outcome - recourse to surgery) in the remaining 8 patients (25%).

No complications occurred in our patients.

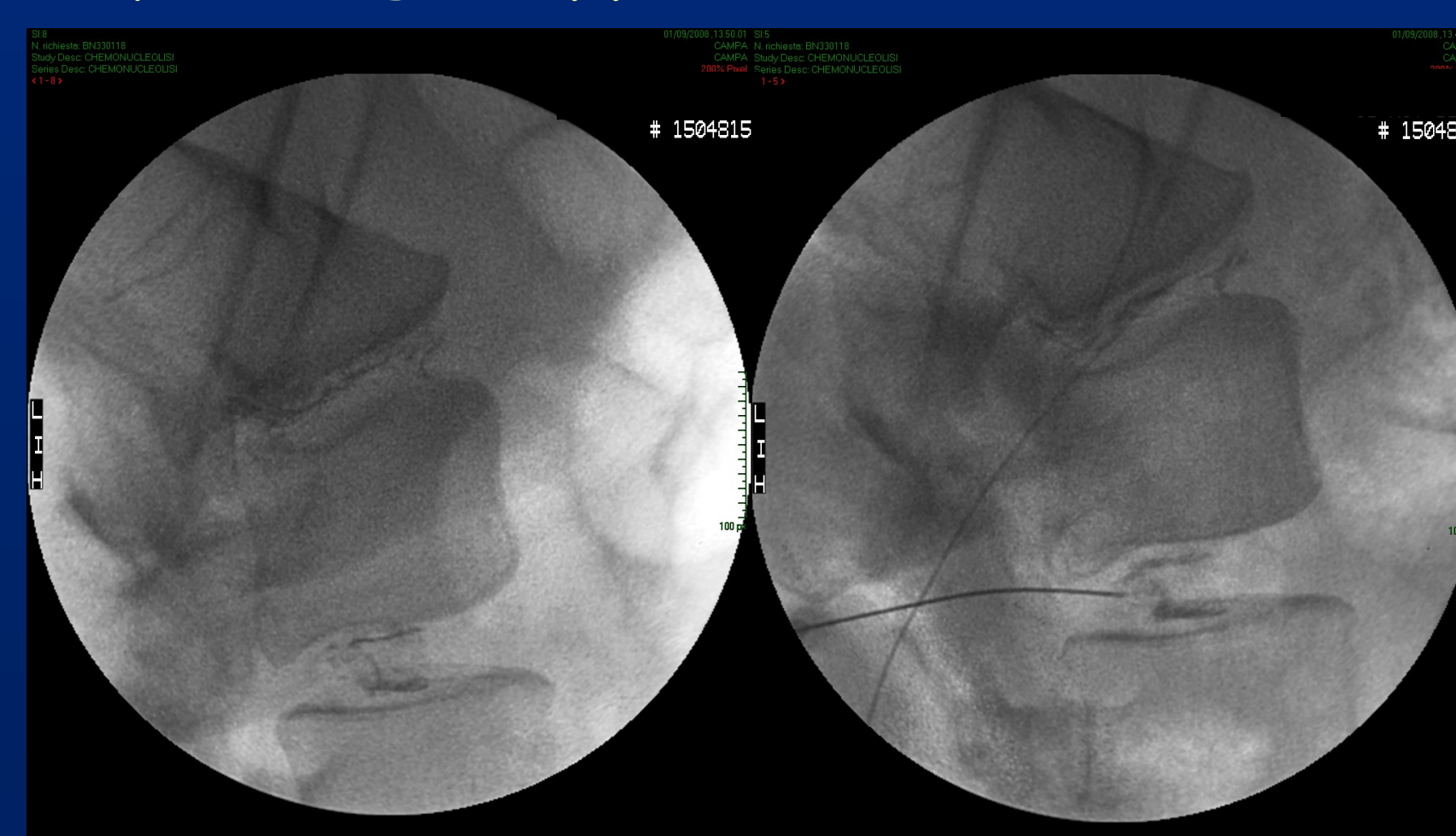
Lumbar discal puncture was performed by extra-spinal lateral approach using a 22G x 17.78 cm BD spinal needle, under fluoroscopic guidance (Fig. 2).

50 disks in 32 patients were treated.

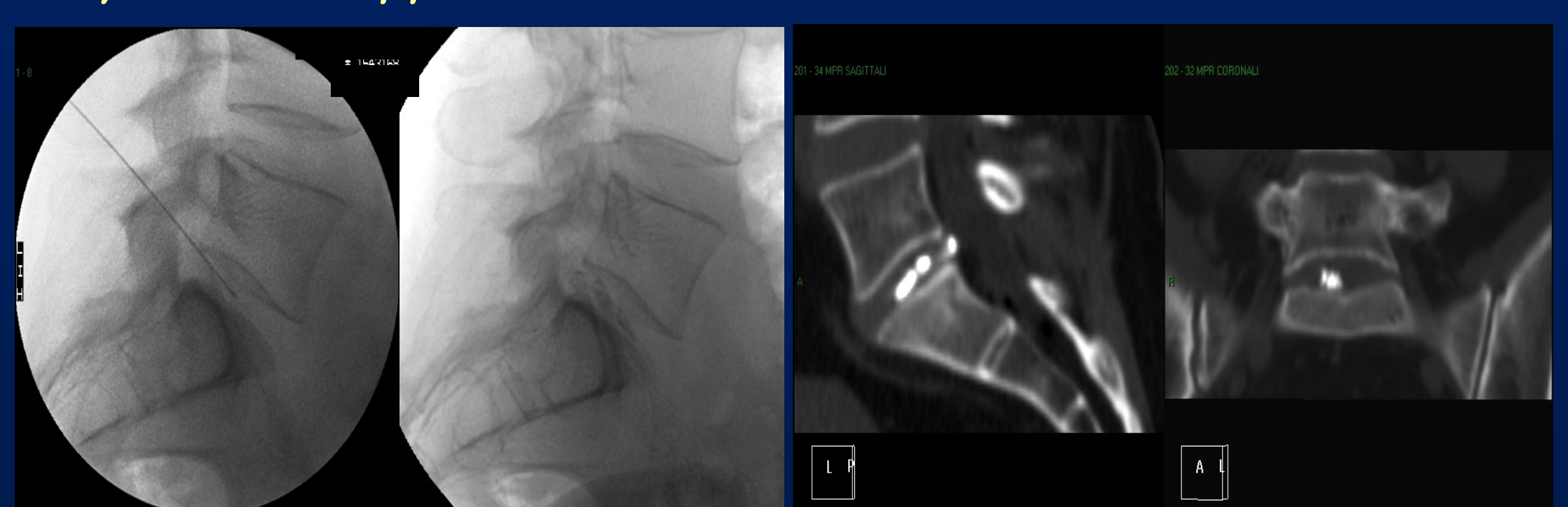
DiscoGel® quantity injected in our series depended on the available disk space (from 0,5 ml to 1,3 ml).



47y/F ; right approach L1-L2: 0,8ml



40y/M; left approach L4-L5: 0,8ml L5-S1: 0,8ml



52y/F ; right approach L5-S1: 0,7ml

50 discs in 32 Pts

19 pts: 1 discal level
8 pts: 2 discal levels
5 pts: 3 discal levels

50 discs in 32 Pts

L1-L2: 2
L2-L3: 4
L3-L4: 8
L4-L5: 19
L5-S1: 17

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 chemionucleolysis fails, before recourse to surgery, or when surgery is not possible.