Effect of Drugs Administration into the Epidural Space During Epiduroscopy

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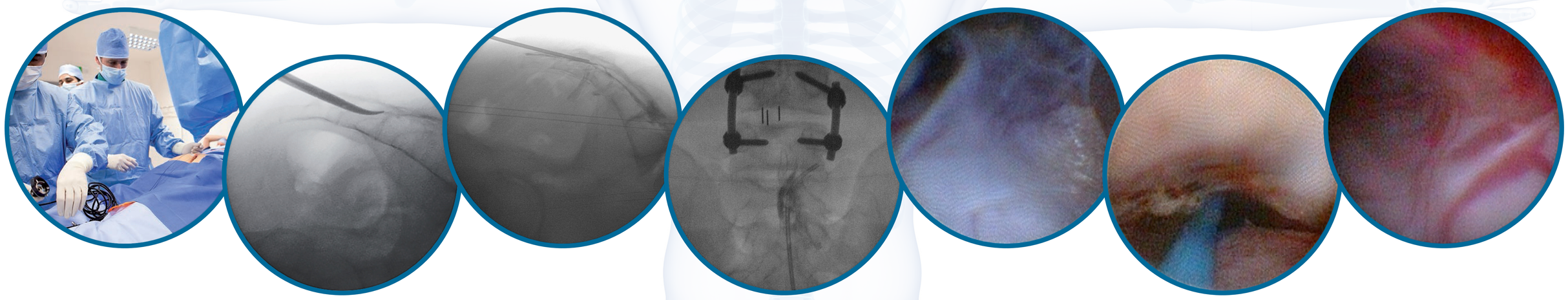
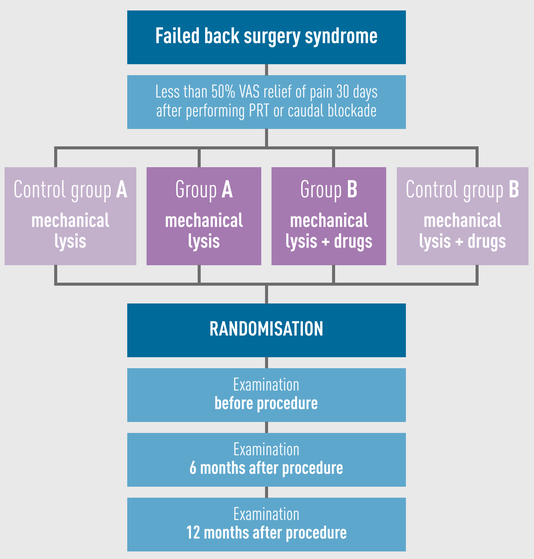
Epiduroscopy

Epiduroscopy is a relatively new procedure used in the evaluation and treatment of low back pain via advancements of optical fibre technology. As a minimally invasive endoscopic technique, it allows direct endoscopic imaging of the epidural space and helps with pain management for patients suffering from post–lumbar surgery syndrome (PLSS) and other cases of low back pain and radiculopathy (Sayhan et al., 2016).

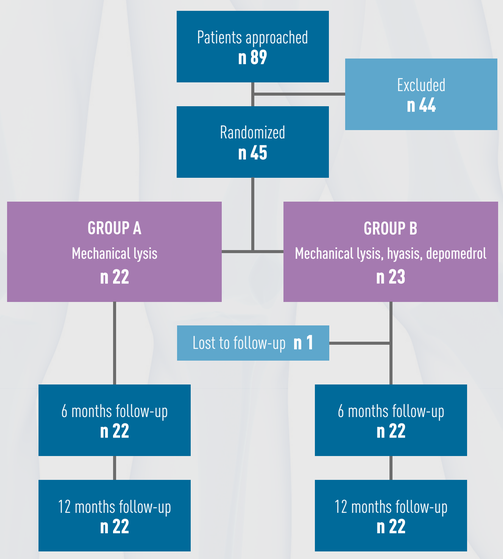


EuroPainClinics® Study II

EuroPainClinics® Study II (EPCS II) (PRS: NCT02459392 ClinicalTrials.gov) is a multicentre prospective control clinical study. Three Pain Clinics in the Slovak republic (Bratislava, Bardejov, Košice) and one Pain Clinic in the Czech republic (Prague) are included in the participation. EPCS II objectifies the benefits of epiduroscopy. It is focused on pursuing long-term pain relief and improved quality of life in these patients. The aim of the study is to compare the efficacy of drugs (enzyme Hyaluronidase, local anesthetic Bupivacaine and corticosteroid Methylprednisolone) administrated into the epidural space during epiduroscopy.



In this part we present our pilot data. Of the 86 admitted patients with PLSS, 45 fulfilled the selection criteria and were randomised into two groups (Group A - mechanical lysis, Group B – mechanical lysis and drugs) and then underwent epiduroscopy.

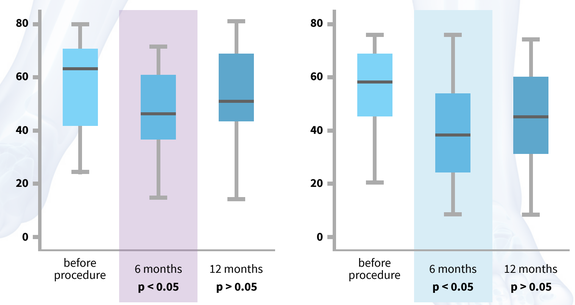


Study subjects in both groups had a significant improvement of their ODI score after 6 months. We also noticed significantly lower pain scores measuring leg-pain and back-pain ($p<0.05$) on the 6-months follow-up. However, we recorded a return to the baseline on almost all monitored parameters on the 1-year follow-up in both groups of our patients. We only registered a statistically significant improvement in pain score (NPS) of the back pain on the 1-year follow-up in the Group B.

CHARACTERISTICS OF THE PATIENTS

	Group A	Group B
Participants (n)		
before procedure	22	23
6 months follow-up	22	23
12 months follow-up	22	22
Age (years)	54 median (35 min - 70 max)	46,5 median (33 min - 69 max)
Sex (F/M)	10/12	10/12
ASA	2 median (1 min - 3 max)	2 median (1 min - 3 max)
BMI	22	20
Pain in dermatomas according to examination before procedure		
L2	0	1
L3-L4	1	0
L4-L5	4	5
L5	2	6
L5-S1	5	1
S1	4	4

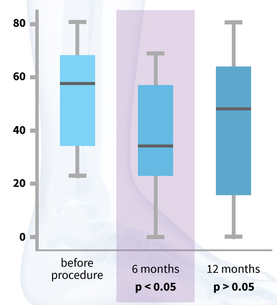
OSWESTRY DISABILITY INDEX



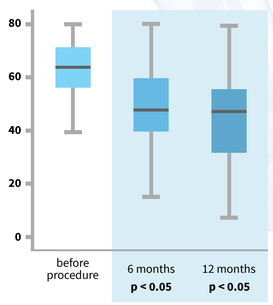
Group A - Mechanical lysis

Group B - Mechanical lysis + Drugs

NUMERICAL PAIN SCALE - BACK PAIN

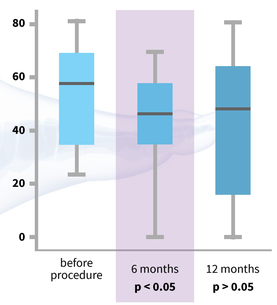


Group A - Mechanical lysis

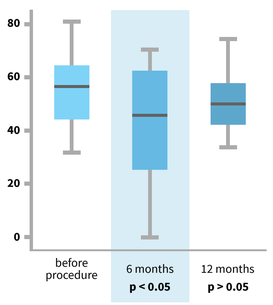


Group B - Mechanical lysis + Drugs

NUMERICAL PAIN SCALE - LEG PAIN



Group A - Mechanical lysis



Group B - Mechanical lysis + Drugs

The initial results of our study showed **an improvement on the 6 month follow-up** in both of the observed groups, concerning the back and lower limb pain. On the 12 months follow-up, the effect of pain relief in the lower limbs was insignificant in both groups. **A significant improvement** of the pain score was only registered for the back pain in the group of patients receiving medications in addition to mechanical lysis.