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**Introduction.** Sciatica is a common disease, between 73% and 85% of the general population will experience at least one episode of sciatica due to spinal disc herniation and nerve root irritation. Percutaneous intradiscal techniques of nucleoplasty can be applied as an intermediate measure between conservative treatment and surgery, with a view to avoiding the adverse events associated with surgical discectomy. In some specialist centers, good results were obtained with pure ethanol, mixed with ethylcellulose to increase its viscosity and enhanced with radio opaque material.

**Material and methods.** A total of 49 patients were included in this study and treated with radio opaque gelified ethanol and intraarticular steroids of a lumbar and cervical intervertebral disk hernia. We evaluated each patient's pain levels during the procedure itself and then after 3-4 and 8 weeks, and 4, 8, 12, 24 months after procedure.

**Results.** Pain levels immediately after the procedure were markedly lower than before the procedure. There were no complications. Two months after procedure administration, the initial pain level had fallen by an average of 84 %. The outcome was quite stable over time (mean follow-up: 2 years). Short-term follow-up with magnetic resonance showed little or no changes in the intervertebral disk but there was discordance with clinical signs. Long-term follow-up magnetic resonance showed a dramatic reduction in hernia volume. Very good or good results were obtained in 42 (89,1%) of the 49 patients, fair - in 16 cases and bad in 3 cases ( 8.6%). Only 2 cases with a bad outcome at lumbar level went to surgery.

**Conclusion:** This preliminary study shows the efficacy and inoccuity of this substance. More especially, it demonstrated the absence of complications and recidivates in the immediate and long-term follow-up for more than 3 years for the first cases.

## INFLUENCE OF SURGICAL CORRECTION OF INGUINAL HERNIA AND HYDROCELE ON TESTICULAR BLOOD FLOW IN CHILDREN

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Inguinal hernia and hydrocele affect the blood circulation of the testicle. Surgical trauma may change testicular blood flow.

**Objective.** To study changes in blood flow parameters in children with pathology of the processus vaginalis, requiring surgical correction, using the analysis of ultrasound data.

**Materials and methods.** We observed 87 boys from 3 to 17 years old, operated for congenital inguinal hernia and hydrocele. As a control group we examined 34 boys without pathology of the reproductive system. Patients held Doppler ultrasound the day before surgery, at 1 and 7 days after. Peak systolic flow velocity, end-diastolic flow velocity and resistance index were studied.

**Results.** The resistance index on the affected side was higher compared with the control group before operation ( $p < 0,05$ ). The values of peak systolic and end diastolic blood flow velocities were lower than in the comparison group ( $p < 0,05$ ). Resistance index increased compared with preoperative period 1 day after surgery ( $p < 0,05$ ). Values of flow velocity parameters decreased to 4-9 % compared to values before the operation. The resistance index decreased ( $p < 0,05$ ) to near baseline figures a week after the operation. Peak systolic and end-diastolic flow velocity raised to 15-21 % compared to the preoperative period. However, the intensity of the blood flow in the affected testicle remained lower than in the control group ( $p < 0,05$ ).

**Conclusions.** The blood flow of affected testicle in children with inguinal hernia and hydrocele is initially decreased. Early postoperative period is characterized by intensification of testicular parenchyma's ischemia. Postoperative blood flow in the affected testicle is improved a week after surgery, but the lack of blood supply to the testicle is retained.