Effect the number and size of veins ligated at left sided microsurgical inguinal varicocelectomy on semen analysis outcomes

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Introduction: The most common cause of male infertility is varicocele, and varicocele is the most common correctable cause of male factor infertility. The inguinal microsurgical techniques are innovative techniques that allow the ligation of all of the veins. Diameter and number of veins ligated seems to be involved in treatment results. The purpose of this study was to investigate the role of number and diameter of ligated veins in the changes of semen analysis parameters.

Methods: In a descriptive analytical study, 50 patients with varicocele were studied. Preoperative semen analysis was performed in two steps. In all of them varicocelectomy sub-inguinal microscopic were done. Results were compared with semen analysis after 6 months.

. **Results:** Fifty patients with mean age 30±0.7 years were enrolled. The patients complaint was pain in 28% and 72% infertility. Varicocele grading was 12% grade 1, 42% grade 2 and 46% grade 3. In the sperm count ، morphology and motility between before and after surgery was significant difference. There were no significant differences in other parameters of semen analysis. There were no significant differences in other parameters of semen analysis. In patients with over 10 veins ligation had occurred significant improvement in sperm count, morphology and motility. In other patients less than 10 veins were ligated improvement in sperm count was observed. The diameter of the veins were ligated had no role in the changes in semen analysis.

Conclusion: Our results indicate that varicocelectomy treatment was effects on improving some of semen analysis parameters. Improvement in sperm count and morphology and motility were occurred with increasing number of veins ligated. However, venous diameter have been not effect on semen analysis parameters.

Key words: Infertility, Varicocelectomy, Vein