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# **Comparative Study between Loupe-Assisted Varicocelectomy with Nitroglycerin Instillation versus Microscopic Varicocelectomy**

Thesis submitted for partial fulfillment of the Master degree in UROLOGY

By

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**M.B.B. Ch., Fayoum University**

Department of Urology  
Faculty of Medicine  
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## *Summary*

present study was done to compare between loupe assisted varicocelectomy (LV) with nitroglycerin instillation as a vasodilator to enhance testicular artery pulsation detection and identify more affected veins and microscopic varicocelectomy (MV) procedures. Studying their effect on semen parameters, blood flow velocities of the capsular and intratesticular arteries and testicular volume before and after the operation. 60 patients were included in this study divided into 2 groups each group contains 30 patients. 49 patients with bilateral varicocele and 11 patients with left sided varicocele only. Preoperatively all patients were assessed clinically to detect clinical grade of each affected side. At least 2 semen analysis were done preoperatively. Scrotal colored doppler ultrasonography were done to all patients with assessment of testicular volume, measurements of vein diameter, reflux with valsalva maneuver, peak systolic velocity (PSV), end diastolic velocity (EDV) and resistive index (RI) for intratesticular and capsular arteries. Intraoperatively we searched for testicular artery pulsation in each side of operation, record duration of the procedure, count the number of ligated veins and compare these results between both groups. As we use nitroglycerine instillation during LV procedure, we recorded systolic and diastolic blood pressure before and after instillation. Postoperatively we followed up all patients for 3 months and record any complication during follow up. At the end of follow up period all patients we evaluated by new semen analysis and colored doppler ultrasonography to study the effect of each procedure on semen parameters and on arterial blood flow velocities postoperatively.

Our results revealed that both techniques are safe and effective in treating varicocele, but nitroglycerine instillation can enhance the efficacy of LV technique

## *Summary*

to be comparable to MV procedure while its easier for beginners with shorter learning curve and cheaper than MV techniqu

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