

## Assessment of outcomes of a new closed surgical technique for hydrocele operation and comparison with standard excisional techniques

Mohammad Reza Darabi (MD)\*<sup>1</sup>, Ali Ahaniyan (MD)<sup>2</sup>

<sup>1</sup> Associate Professor, Department of Urology, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran. <sup>2</sup> Assistant Professor, Department of Urology, Imam Ali Hospital, Zahedan University of Medical Sciences, Zahedan, Iran.

### Abstract

**Background & Objective:** Hydrocele is fluid accumulation between the two layers of tunica vaginalis which commonly seen in male patients. Hydrocele is divided as communicating and non communicating categories. There are different methods for treatment of adult non communicating hydrocele which principally consist of aspiration and sclerotherapy, and various surgical techniques. The aim of this study is to evaluate outcomes and complications of a new closed hydrocelectomy technique and comparison with excisional hydrocelectomy procedures.

**Materials & Methods:** In this clinical trial study, we divided all adult patients who referred for surgery of non communicating hydrocele to Imam Reza and Qaem hospital in Mashhad-Iran into two groups during 2004 to 2006. The inclusion criterion was simple non communicating hydrocele without any underlying pathology in adult patients who agreed with this new technique. In the first group (Group I) 23 patients with 24 hydroceles underwent closed hydrocelectomy using a catheter (shunt) between scrotal subcutaneous tissue and the hydrocele sac. In the second group (group II) 29 patients with 29 hydroceles underwent excisional hydrocelectomy. Follow up was possible in 21 cases of group I and 23 cases of group II. The outcomes of both procedures including cure rate, recurrence and complications such as infection, post operative pain, edema, hematoma, and testicular atrophy were compared in Two groups.

**Results:** In group I, 13 cases (62%) were cured but 8 cases (38%) experienced recurrence (treatment failure). In group II, 22 patients (95.6%) were cured but one patient (4.4%) had recurrence. Post operative pain in group I was mild in 9 patients (42.9%), moderate in 11 patients (52.4%) and severe in one patient (4.7%). But in group II all patients (100%) experienced severe pain requiring parenteral analgesics (opioids). Hematoma was occurred in 2 patients (8.7%) in group II but in none patients in group I. No patients in any groups developed infection or testicular atrophy.

**Conclusion:** This study showed that although recurrence rate of closed hydrocelectomy is more frequent but its complications are less than open procedures. In patients with high surgical risks in whom excisional hydrocelectomy is less preferable, this closed hydrocelectomy technique may be the technique of choice.

**Key Words:** Hydrocele, Hydrocelectomy, Closed hydrocelectomy, Excisional hydrocelectomy

\* Corresponding Author: Mohammad Reza Darabi (MD), E-mail : j\_darabi@yahoo.com