

## The role of laparoscopy in the management of azoospermic men with Non-palpable testis

Amirjannati N. (M.D.)<sup>1</sup>, Akhondi M.A. (Ph.D.)<sup>1</sup>, Sadri Ardekani H. (M.D.)<sup>1</sup>, Soltangharaee H. (M.D.)<sup>1</sup>, Jeddi-Tehrani M. (Ph.D.)<sup>2</sup>, Modarresi M.H. (M.D., Ph.D.)<sup>3,4</sup>

1- Reproductive Biotechnology Research Center, Avesina Research Institute, ACECR, Tehran, Iran.

2- Monoclonal Antibody Research Center, Avesina Research Institute, ACECR, Tehran, Iran.

3- Nanobiotechnology Research Center, Avesina Research Institute, ACECR, Tehran, Iran.

4- Faculty of Medicine, Medical Sciences / Tehran University, Tehran, Iran.

### Abstract

**Introduction:** Infertility and azoospermia are among the clinical presentations of males with impalpable testis. The management of non-palpable testis especially in adult patients remains controversial. Routine imaging methods like sonography, CTS and MRI are not sensitive enough to detect impalpable testes and have high false negative results. Therefore, it is necessary to perform laparoscopic examination in such patients. Although a few studies have reported benefits of laparoscopic examinations in the management of such cases, but it is still subject to many controversies showing the need for more investigations in this area. The aim of this study is to evaluate the role of laparoscopy in the diagnosis and treatment (mostly orchiectomy) of impalpable testis in azoospermic men.

**Materials & Methods:** This is a case series study in which the files and laparoscopy movies of patients who had attended Avesina Infertility Clinic from February 2006 to October 2005 and had indication for laparoscopy were retrospectively analyzed. During the study twenty testicular units from 12 married patients with primary infertility and azoospermia were studied. After preliminary evaluations, informed consent for probable orchiectomy was taken from the patients. After preoperative preparations, diagnostic/surgical laparoscopies were performed. In cases of blind ending vessels or vanishing testes, the procedure was terminated. Orchiopexy or orchiectomy was performed based on testis size, distance from internal ring and patient's age.

**Results:** Twenty testicular units from 12 patients with unilateral or bilateral cryptorchidism were studied. The mean age of patients at the time of attendance and laparoscopy was 37 years (33-43). Eight patients presented bilateral non-palpable testes and four patients with palpable one-sided atrophic testis, two patients had natural descents and two had undergone postpubertal orchiopexy. From the 20 impalpable testes undergoing the procedure, 5 (25%) were absent, 3 vanishing testes and 2 previously done orchiectomies. 15 out of the 20 testes (60%) were located in intra-abdominal cavity and were managed successfully by the means of laparoscopic orchiopexy or orchiectomy. No laparoscopy related complications occurred. All testicular biopsies from orchiopexy or orchiectomy were sent to a pathology laboratory. Three of the 15 biopsies were reported as atrophic testis, three as immature testis and 8 of them had germ cell aplasia.

**Conclusion:** The data suggest that laparoscopy can be considered as a safe and effective method for the management of non-palpable testis in adults. The patients may experience less pain and benefit from better cosmetics, early discharge and rapid recovery.

**Key Words:** Impalpable testis, Azoospermia, Orchiopexy, Laparoscopic orchiectomy, Andrology surgery.

**Corresponding Author:** Dr. Naser Amirjannati, Reproductive Biotechnology Research Center, Avesina Research Institute, ACECR, P.O.Box:19835-177, Tehran, Iran.

**E-mail:** namirjannati@yahoo.com