



XI. EURASIAN ANDROLOGY SUMMIT & 18TH ESSM JOINT MEETING

4 - 6 February, 2016
Madrid - Spain



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Dear Colleagues,

It is a great pleasure to invite you to the **11th Annual Eurasian Andrology Summit**, which will be organized in Madrid, Spain, on the 5th of February 2016, during the ESSM Congress.

The Eurasian Andrology Summit organizes updated Andrology meetings every year in different countries to promote international communication from a wide geographical area on male and female sexual health and also male reproductive diseases.

The first meeting was organized in Azerbaijan in 2006 followed up by subsequent meetings in Uzbekistan, Kyrgyzstan, Russia, Ukraine, Albania, Romania, Hungary, Russia and Denmark. The 11th meeting in Madrid will be held with the Italian Society of Andrology (SIA).

We look forward to see you at this summit in Madrid, a city which we will have not only scientific and geographical, but also cultural and historical sharing all together...

Yours sincerely,

Prof. Dr. Selahittin Çayan
Scientific Chair of the
Turkish Society of Andrology

Prof. Dr. İrfan Orhan
President of the
Turkish Society of Andrology

Prof. Dr. Giorgio Franco
President of the
Italian Society of Andrology

Prof. Dr. Ateş Kadioğlu
Secretary General of the
Eurasian Andrology Summit



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Scientific Program

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Discussed Poster Presentation

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February 5, 2016, Friday | Scientific Program

NS-02

National Symposium

09:00 - 12:30

Room Berlin

**Eurasian Andrology Summit in conjunction with the Italian Society of Andrology (SIA):
Update on the treatment of male infertility**

Program chairs:

Ateş Kadioğlu, Turkey

Giorgio Franco, Italy

Selahittin Çayan, Turkey

Organiser: TAD and SIA

Section-1 (09.00-10.30)

Chairs: Ateş Kadioğlu, Turkey
Giorgio Franco, Italy

09:00 - 09:30 Nightmare session: Difficult case presentations in andrology from residents to faculties

Residents: Leonardo Misuraca, Italy
Eugenio Ventimiglia, Italy
Mehmet Ali Karagöz, Turkey
Juan Gómez Rivas, Spain

Faculties: Fulvio Colombo, Italy
Jens Sonksen, Denmark
Ignacio Moncada Iribarren, Spain

09:30 - 10:30 Panel: Update on the medical treatment of male infertility

09:30 - 09:45 Idiopathic male infertility: Evidence based treatment options
Zsolt Kopa, Hungary

09:45 - 10:00 Current treatment of hypogonadotropic hypogonadism
Murad Başar, Turkey

10:00 - 10:15 Fertility preservation in male cancer patients
Aleksander Khelaia, Georgia

10:15 - 10:30 Approach to sperm retrieval in men with neurogenic anejaculation
Mikkel Fode, Denmark

10:30 - 11:00 Break



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Section-2 (11.00-12.30)

Chairs: David Ralph, United Kingdom
Önder Yaman, Turkey

11:00 - 11:45 Panel: Update on the surgical treatment of male infertility

11:00 - 11:15 Update on the microsurgical varicocele repair
Selahittin Çayan, Turkey

11:15 - 11:30 Update on the surgical treatment of proximal and distal obstruction
Giorgio Franco, Italy

11:30 - 11:45 Update on sperm retrieval techniques / microTESE for ART
Giovanni M. Colpi, Italy

11:45 - 12:30 Panel: Challenging cases in male infertility

Moderator: Ateş Kadioğlu, Turkey

Panelists: Andrea Salonia, Italy
Ahmad Shamsodini, Qatar
Barış Altay, Turkey
Carlo Bettocchi, Italy

12:30 - 14:00 Discussed Poster Presentation

Moderators: İrfan Orhan, Turkey
İlham Ahmedov, Azerbaijan
Bilal Gümüş, Turkey



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*Text of the
Presentation*

IDIOPATHIC MALE INFERTILITY: EVIDENCE BASED TREATMENT OPTIONS

Zsolt Kopa, Ph.D

Andrology Centre - Semmelweis University, Department of Urology, Budapest, Hungary

Infertility (no pregnancy within one year) affects 15% of the couples in European developed countries. In ~50% of infertile couples male associated factor can be found with decreased semen parameters. Approximately 30% of these cases are idiopathic. The term idiopathic male infertility means infertility of unknown origin with abnormal sperm parameters. The treatment of idiopathic male infertility is an issue of debate. Reviewing the literature no evidence based conclusions could be drawn by the lack of appropriate randomised controlled trials (RCT).

Specific treatment options can be obtained in certain cases diagnosed with organic aetiology (i.g. hypogonadotropic hypogonadism, varicocele, male accessory gland infection, immune infertility and ejaculatory dysfunctions). In idiopathic male infertility only non-specific, so called empirical medical treatment (EMT) modalities has been used worldwide lacking any based evidence. This presentation will summarize the most recent publications focusing on well structured clinical trials in the field of idiopathic male infertility.

Empirical options are classified as hormonal and non-hormonal medical therapies. Gonadotropins regulate spermatogenesis and testosterone production and have a clear efficacy in the treatment of hypogonadotropic hypogonadism. A recent meta-analysis reported a higher pregnancy rate using gonadotropins in idiopathic male infertility. However, the low number of the clinical trials, the different treatment protocols, follow-up periods and non-reported miscarriage rates give a strong limitation of the analyzed trials. Data are insufficient to make evidence based conclusions. Androgens are needed surrounding the Sertoli-cells for spermatogenesis but exogenous androgen intake will not improve this process, moreover leads to decrease of spermatogenesis due to the inhibitory effect of the hypothalamic-pituitary axis. Recent international guidelines contraindicate the use of testosterone for infertility treatment. Antiestrogens block endogenous estrogens resulting inhibition of the negative estrogens feedback effects which leads to improved gonadotropin secretion so stimulates spermatogenesis and testosterone production. A Cochrane Database review reported a beneficial effect of antiestrogens on hormonal levels, but there is no evidence regarding the improvement of pregnancy rates. A recent meta-analysis of several randomized clinical trials has not been shown to be effective in idiopathic oligospermia, however more recent emerging data suggest that clomiphene may have some benefit, slight improvement in sperm parameters and an increased pregnancy rates were observed. Aromatase inhibitors act blocking the negative feedback of estrogens thus increasing the secretion of FSH and LH which may lead to the improvement of spermatogenesis and steroidogenesis. Only very limited data are available from clinical trials regarding the use of aromatase inhibitors in idiopathic male infertility, increased sperm parameters are reported only in few clinical studies. Long term use of aromatase inhibitors can lead to significant complications in bone density and fat mass.

Recently a growing use of non-hormonal empirical medical treatment can be observed worldwide. Antioxidants in a standard diet and especially in multiple nutritional supplementation therapy are dedicated to act against oxidative stress status which is significantly more frequent in sub/infertility. However the majority of the studies have strong limitations, a recent Cochrane analysis showed improvement in pregnancy and live birth rates with inconclusive evidence in assisted reproduction. Vitamins inhibit reactive oxygen species production; some limited studies showed an improvement in sperm concentration but there have been no randomized controlled trials with pregnancy rate outcome. Zinc has an antioxidant and anti-apoptotic activity previously used improving sperm motility. A recent randomised study reported a slight improvement in all sperm parameters, pregnancy and live birth rates. More studies showed a beneficial effect of carnitins on sperm concentration and motility, moreover a meta-analysis reported improvement in pregnancy rate, in contrast some randomised clinical trials did not find any beneficial effect to these parameters. Data about the efficacy of other antioxidant agents, selenium, folic acid, coenzyme Q10 and N-acetyl cystein remain conflicting. They have widely been used as empirical treatment options and some emerging results were published but no evidence based conclusion can be drawn about their beneficial effect.

Medical treatment of idiopathic male infertility remained questionable, large-scale, placebo controlled; well structured randomised clinical trials are needed to become an evidence based conclusion about their efficacy.

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CURRENT TREATMENT OF HYPOGONADOTROPIC HYPOGONADISM

Murad Basar, MD

Memorial Sisli Hospital, Department of Urology, Istanbul, Turkey

Infertility has been described as a couple's inability to pregnancy after 1 years of intercourse without any contraceptive methods. There are several reasons of male infertility due to hypothalamic, pituitary and testicular disorders. Testicular sperm production under the control of hypothalamic, pituitary and testicular hormonal activity. GnRH secreted from hypothalamus affects gonadotropins secretion (FSH and LH) from pituitary glands. Then, gonadotropins cause to testosterone secretion from Lending cells in testes. Intratesticular testosterone levels are approximately 40 to 100 times higher than serum levels, and this higher level is very important for the sperm production and maturation.

Hypogonadotropic hypogonadism is a condition of low serum testosterone level due to decreased production of gonadotropins from the pituitary gland. It is observed around 3% of infertile male and has two different forms as congenital or acquired. A congenital form is known as Kallmann syndrome. Acquired forms are due to pituitary tumors. However, idiopathic forms can be observed in infertile couples. Hypogonadotropic hypogonadism is one of the few causes of non-obstructive azoospermia/severe oligoasthenozoospermia. Additionally, this is the only condition that where hormonal treatment is indicated for infertile male.

Treatment is begun with human chorionic gonadotropin 1500-5000 IU once or three times per week. The aim of this treatment is to start to testosterone production and increase to intratesticular testosterone levels. After achieving to eugonadotropic level in three to six months, FSH is supplemented at 37.5-150 IU twice or three times. This combined treatment should be used around 9-12 months or until spermatogenesis initiated.

Another alternative method of hypogonadotropic hypogonadism is pulsatile GnRH administration. Although spermatogenesis is started in 77% of cases in the second year of treatment, this method is more difficult and more expensive than gonadotropin usage. Additionally, the patients must have functionally pituitary gland.

Medical treatment is effective for hypogonadotropic patients. However, there are some predictive parameters about success rate. Post pubertal hypogonadism, high testicular volumes, advanced sexual maturity and higher baseline gonadotropin levels are the good prognostic criteria for gonadotropin treatment. On the contrary, cryptorchidism history, prior testosterone usage and obesity are the bad prognostic criteria.

FERTILITY PRESERVATION IN MALE CANCER PATIENTS

Aleksander Khelaia, MD

National Center of Urology, Tbilisi, Georgia

Over the past quarter century cancer incidence in adolescents and young adults has been rising, while at the same time major advances in therapeutic management have led to improved prognosis. Every year in the USA, cancer is diagnosed in over 9000 males between 15 and 35 years of age, and in over 4000 children under the age of 15 (1). Testicular cancer, lymphoma and leukemia are the most common malignancies diagnosed in these young men, but a variety of other solid – organ malignancies have also been described. Advances in diagnostic techniques and treatment modalities have markedly improved the chances of cure or long-term remission in these patients, with overall cure rates now approaching 90% (1).

Harmful effects of chemotherapy and radiation on spermatogenesis are variable, it is not possible to predict with certainty if spermatogenesis will return to normal after therapy. Moreover in many cancer patients sperm quality is already impaired before they receive any form of treatment. Further deterioration in endocrine and semen parameters due to the damaging effects of cancer therapy may be temporary or permanent. It is impossible to distinguish those patients who will continue to have impaired spermatogenesis following therapy from those who will have sufficient recovery of gonadal function and normal spermatogenesis. According to a recent survey, 51% of men with cancer desired children in the future, including 77% of men who were childless when their cancer was diagnosed (2).

Assisted reproductive technologies (ART) improved fertility potential of cancer survivor patients of reproductive age. Semen quality can be imperfect and there remains some controversy about safety of ART when using sperm from post-treatment patients. Spermatozoa may carry damaged DNA even long after treatment has finished, the concern remains that cancer survivors may transmit a defective genome to their offspring (3).

Therefore, sperm banking before starting chemo- or radiotherapy is highly recommended in young cancer patients. In France, it is now a legal requirement that all patients must be informed about fertility preservation before any gonadotoxic therapy is started (4).

Moreover, in many centers and countries, the increased demand for fertility preservation may also be related to the closer collaboration between cancer teams and sperm banking teams, in accordance with the recommendations of the cancer and reproductive medicine societies (5).

Technical progress in ART also plays a big role, particularly with the development of intracytoplasmic sperm injection (ICSI) which enables pregnancy in spite of a very low number of frozen sperm cells. If sperm cannot be collected by masturbation, other techniques may be used: assistance with penile vibratory stimulation and electroejaculation (6).

However, this option is clearly not applicable to the prepubertal boys. At present there are no established methods of fertility preservation in this age group and therefore options for these patients currently remain entirely experimental. In prepubertal boys testicular tissue harvesting is not without risk, particularly in view of the small size of the testis in this age. This tissue could be thawed and used in one of two ways. Firstly, the stored germ cells could be re-implanted into patient's own testes in order to restore natural fertility – as germ cell transplantation (7).

Alternatively, the stored stem cells could be matured in vitro until they are able to achieve fertilization using procedures such as ICSI. In-vitro maturation of diploid stem cells into haploid spermatozoa is much more difficult to achieve and recently was developed culture system that supports the complete process of spermatogenesis within a mouse model (8). This is an extremely exciting development and offers promise for this approach in the future.

Nevertheless, there remain a group of young cancer survivors that did not freeze sperm samples before gonadotoxic treatments. The reasons for not sperm banking are variable. Some patients may have not been

adequately counseled by their oncologists, underestimating future issues when focusing all their efforts in treating the primary disease. Testicular sperm extraction (TESE) and ICSI may be an option in patients with permanent azoospermia after chemo-and radiotherapy. Another group of patients after temporary azoospermia found spermatogenesis recovery. It is still matter of debate “safety time” before attempt pregnancy. Cancer treatment induced sperm DNA damage may be temporary. In light of the combined evidence from animal and human studies, most authors recommend a posttreatment delay of at least six months, but preferably up to 18 – 24 months from the cessation of treatment to attempt of pregnancy by either natural conception or assisted reproduction. The only available guidelines on this matter have been put by the European Society for Medical Oncology (ESMO), which recommends deferring childbearing for at least 12 months in all male and female patients after cancer therapy (9).

This is a grade C recommendation, based on level IV evidence, which further illustrates the lack of reliable data and clinical consensus on the safe return to unprotected sexual activity following cancer therapy. There is presently no evidence to suggest that the off-spring of post –cancertreatment patients are at increased risk of congenital anomalies or malignancies.

So, fertility preservation remains a major issue for the future of adolescents and young patients with cancer. Training of cancer and reproductive medicine specialists should be optimized, for example, by successful implementation of continuous process improvement to standardize sperm cryopreservation processes. Full collaboration between multidisciplinary teams should be encouraged so that this specific population of young patients and their parents can be appropriately informed before cancer treatment will start (10).

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APPROACH TO SPERM RETRIEVAL IN MEN WITH NEUROGENIC ANEJACULATION

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Extended Abstract

Male fertility is dependent on ejaculation in order for sperm cells to reach and fertilize oocytes in conjunction with intercourse. Ejaculation is initiated through stimulation of the ejaculatory reflex during sexual stimulation. Thus, the afferent limb consists of the dorsal penile nerve which transmits its signal to the spinal cord through the pudendal nerve. Here, the thoracolumbar and sacral ejaculatory centres are activated and, in turn, they trigger the efferent limb of the reflex. Thus, sympathetic nerve fibers from the spinal cord levels T10–L2 activate coordinated peristaltic contractions of smooth muscle in the vas deferens, seminal vesicles and prostate. This facilitates transportation of mature sperm cells and seminal fluid to the posterior urethra in a process called “seminal emission”. Subsequently somatic nerve fibres from spinal cord levels S2–S4 are activated and induce peristaltic contractions of the periurethral muscles and the pelvic floor which propels the ejaculate forward. Meanwhile sympathetic fibers causes the internal urethral sphincter to contract creating a pulsatile projectile ejaculation (1). Any disruption of this mechanism will result in ejaculatory dysfunction. In the most pronounced cases this will be in the form of completely absent ejaculation, which is termed “anejaculation”. Naturally, this results in male infertility. In this regard, spinal cord injury (SCI) is considered the most common cause of neurogenic anejaculation. Thus, only about 10% of SCI men retain their ability to ejaculate through normal sexual stimulation (2). This is especially devastating since these patients are often young men who may desire to father children. Other possible causes of neurogenic anejaculation include congenital spinal abnormalities, transverse myelitis, vascular spine injuries, multiple sclerosis, poorly controlled diabetes mellitus, pelvic trauma, periaortic surgery and retroperitoneal lymph node dissection.

When treating infertility in men with neurogenic ejaculation, the aim is to retrieve enough viable sperm cells to proceed with either self-insemination or assisted reproductive techniques (ART). When the cause of the problem is a mild neurological disorder, it is sometimes possible to stimulate the system sufficiently with sympathomimetic agents (3). However, most often it is necessary to proceed with either assisted ejaculation or surgical sperm retrieval.

Assisted Ejaculation

Assisted ejaculation can be achieved with either penile vibratory stimulation (PVS) or electroejaculation (EEJ). PVS works through mechanical activation of the ejaculatory reflex arch through the dorsal penile nerve. This is achieved through supraphysiological stimulation with medical vibrator which is applied to either the dorsal or the ventral side of the glans penis. In this context it is important to use a precise amplitude of 2.5 mm and a frequency of 100 Hz (4). It is recommended to stimulate for repeated periods of about 2 minutes with small breaks in between. The stimulation should be continued until ejaculation or until side effects necessitate termination of the treatment. Once ejaculation occurs the stimulation is stopped and the ejaculate is collected in a non-spermicidal cup. When stimulation is unsuccessful a subsequent attempt may be made a few weeks later. In such cases the success rate may be improved by stimulation the ventral and dorsal side of the glans simultaneously (5). PVS has a success rate of almost 90% in SCI men with an injury above T10 while the rate drops to about 15% in men with injuries at lower levels (6;7). PVS side effects include damage to the penile skin and – in rare cases – an unwanted sympathetic reflex response called autonomic dysreflexia. To reduce the risk of this complication, patients with injuries above T6 can be pre-treated with nifedipine. The data on PVS in men with non-SCI neurogenic anejaculation is limited. However there are reports that the method may be successful and since autonomic dysreflexia is not a concern in non-SCI patients, it is generally accepted that the method can be attempted. Currently there are two commercially available devices for PVS – namely the FERTI CARE vibrator (Multicept A/S, Frederiksberg, Denmark) and the Viberect-X3 (Reflexonic, Frederick, MD, USA).

In EEJ a probe is introduced into the patient's rectum where it delivers an electrical current which stimulate the smooth musculature in the seminal ducts and accessory sex glands. This in turn induces seminal

emission and a dribbling ejaculation (8). The method was originally employed in veterinary medicine but the method has proved very successful in the treatment of neurogenic anejaculation. Thus, the procedure is almost always successful when carried out in the correct manner and it seems it can be used in all cases of neurogenic anejaculation. However, EEJ is more expensive than PVS and in men with retained pelvic sensation, EEJ must be carried out in full anaesthesia. The electrical current is delivered in waves with 5 seconds of stimulation followed by a 20 seconds pause where ejaculation can occur. Stimulation is started at 2.5-5 V with increasing voltage employed in subsequent stimulation waves until a maximum of 30 V. It is important to "milk" the urethra to obtain the maximum amount of viable sperm. Contraindications to EEJ include rectal lesions and bleeding disorders. Meanwhile, side effects include rectal trauma and autonomic dysreflexia. The only available EEJ device is the Seager Model 14 Electroejaculator (Dalzell Medical Systems, The Plains, Virginia, USA).

When offering assisted ejaculation to patients with anejaculation, it is important to note that PVS is the recommended first choice due to lower cost, general patient preference and the finding that PVS result higher total motile sperm counts (9). In fact, PVS often results in sperm counts that are high enough to allow for simple intravaginal self-insemination (4-5 million motile sperm). In this procedure, the couple brings the PVS device home and after inducing ejaculation, they simply inject the unprocessed ejaculate into the vagina of the female partner with a needle-less syringe. The largest published study on this method showed that 60/140 couples achieved an overall of 82 pregnancies resulting in 73 babies. The median time to pregnancy was 22.8 months (10).

Surgical Sperm Retrieval

When it is not possible to obtain sperm by assisted ejaculation, surgical sperm retrieval is warranted. This can be done by percutaneous aspiration from the vas deferens, the epididymis or the testis or it can be done through different forms of testicular biopsies. These methods are obviously more invasive and more costly than assisted ejaculation and may result in pain, bleeding and infection. In addition, the yield of viable sperm is generally so low that it commits the couple to in-vitro fertilization with or without intracytoplasmic sperm injection.

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UPDATE ON THE MICROSURGICAL VARICOCELE REPAIR

Selahittin Cayan, MD, FECSM

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This presentation reviews update on the microsurgical varicocele repair in infertile men with varicocele. Infertility is detected in 15% of couples who desire children, however, the ethiology is pure male factor in 20%, and male and female factors in 30-40% of the couples. Therefore, the assessment of male infertility plays important role in approximately 50% of the couples (1).

Varicocele is the most commonly seen and correctable cause of male factor infertility (2,3). Varicocele is among a cost effective treatment of infertility. The aim of the evaluation of infertile men with varicocele is to point out to diagnose correctable pathologies, to also determine use of assisted reproductive technologies (ART), if surgical treatment of varicocele is not indicated (4-7).

Physical examination is the reference standard to diagnose varicoceles in subfertile men. Additional radiologic imaging is not necessary to diagnose subclinical varicocele, because only a varicocele detected by physical examination should be considered potentially significant (8). When clinical palpable varicocele coexists with impaired semen quality, surgical repair may potentially restore spermatogenesis and fertility. Recent meta-analyses suggested that varicocele repair have beneficial effect on fertility status in infertile men with palpable varicocele (9,10). Ficarra et al reviewed randomized clinical trials for varicocele repair and found a significant increase in pregnancy rate in patients who underwent varicocele treatment (36.4%) compared with patients having no treatment (20%) (9). Marmar et al reported a 33% pregnancy rate in patients who underwent surgical varicocelectomy and a 15.5% pregnancy in the controls receiving no varicocelectomy (10).

Indications for treatment of varicocele are presence of clinical palpable varicocele with infertility history and abnormal semen parameters, and pain, if medical conservative treatment such as analgesics/anti-inflammatory drugs fails (11).

Treatment options for varicocele in infertile men include open surgical, radiologic and laparoscopic approaches (12,13). Postoperative pregnancies occur with a mean duration of 7 months (3-11 months) after surgery (4).

The best treatment modality for varicocele in infertile men should include higher seminal improvement and spontaneous pregnancy rates with lower complication rates such as recurrence or persistence, hydrocele formation and testicular atrophy. Therefore, the ideal technique should aim ligation of all internal and external spermatic veins with preservation of spermatic arteries and lymphatics (13).

Radiologic treatment of varicocele seems to have some advantages including shorter recovery period and lower cost, however has some disadvantages such as operation failure, higher recurrence rate, thrombosis and contrast agent allergy.

Laparoscopic varicocelectomy can be done either transperitoneally or extraperitoneally, and seems to have postoperative recovery period. However, it is not possible to ligate external spermatic veins which might cause recurrence.

High ligation has less arterial injury at the proximal level, however it is unable to ligate external spermatic and gubernacular veins.

Microsurgical varicocele repair can be performed via inguinal or subinguinal approach. Although the subinguinal approach to microsurgical varicocelectomy obviates the need to open the aponeurosis of the external oblique, it is associated with a greater number of internal spermatic veins and arteries compared with the inguinal approach. Subinguinal microscopic varicocelectomy has disadvantages, needing more skills because of higher number of internal spermatic vein channels, higher risk for arterial injury due to smaller artery in diameter at the level of the external inguinal ring (13).

Open microsurgical inguinal or subinguinal varicocelectomy techniques have been shown to result in higher spontaneous pregnancy rates and fewer recurrences and postoperative complications than conventional varicocelectomy techniques in infertile men. Use of higher magnification allows surgeons to preserve the internal spermatic artery and lymphatics and also to visualize and ligate all spermatic veins (14).

We published a review/meta-analysis to compare all techniques (13). Overall spontaneous pregnancy rates were 37.69% in the Palomo technique series, 41.97% in the microsurgical varicocelectomy techniques, 30.07% in the laparoscopic varicocelectomy techniques, 33.2% in the radiologic embolization and 36% in the macroscopic inguinal (Ivanissevich) varicocelectomy series, revealing significant difference among the techniques. Overall recurrence rates were 14.97% in the Palomo technique series, 1.05% in the microsurgical varicocelectomy techniques, 4.3% in the laparoscopic varicocelectomy techniques, 12.7% in the radiologic embolization and 2.63% in the macroscopic inguinal (Ivanissevich) or subinguinal varicocelectomy series, revealing significant difference among the techniques. Overall hydrocele formation rates were 8.24% in the Palomo technique series, 0.44% in the microsurgical varicocelectomy techniques, 2.84% in the laparoscopic varicocelectomy and 7.3% in the macroscopic inguinal (Ivanissevich) or subinguinal varicocelectomy series, revealing significant difference among the techniques. We conclude that the microsurgical varicocelectomy technique has higher spontaneous pregnancy rates and lower postoperative recurrence and hydrocele formation than conventional varicocelectomy techniques in infertile men.

Microsurgical varicocele repair has significant potential not only to obviate the need for ART, but also to downstage the level of ART needed to bypass male factor infertility (4). After varicocelectomy, intrauterin insemination (IUI) may be tried again for men who had not achieved pregnancy by natural intercourse. Following varicocelectomy, the results with IUI seem improved or 11-21% pregnancy rates per cycle (15). The initial sperm concentration is predictive of unassisted pregnancy outcome in this population (16,17). Varicocelectomy may also enhance spermatogenesis within the testis, potentially increasing the chance of successful testicular sperm extraction surgery in patients with previously failed in vitro fertilization (IVF) or intracytoplasmic sperm injection (ICSI) (11).

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UPDATE ON THE SURGICAL TREATMENT OF PROXIMAL AND DISTAL OBSTRUCTION

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Introduction

Surgery for male infertility includes three main areas: varicocele surgery, recanalization of seminal tract and sperm retrieval for Assisted Reproductive Techniques (ART). In this report, the author presents an update on the latest surgical techniques used to obtain a recanalization of the proximal and distal seminal tract when obstructed.

Recent innovations in this field include a new tubular invagination techniques for vasoepididymostomy, which showed excellent results with a simplified and time-saving microsurgical approach, and a new transperineal ultrasound-guided approach for the diagnostic work-up and treatment of distal ejaculatory ducts obstruction (1).

Azoospermia is defined as the complete absence of sperm in the ejaculate even after centrifugation. With a prevalence of 1% among general male population and 10-15% among infertile men, it can be classified in two large groups: Obstructive and Nonobstructive Azoospermia (OA and NOA). The first is caused by an obstruction in the seminal tract (epididymis, vas, ejaculatory ducts) and the latter is due to impaired sperm production by the testis for congenital maldevelopment, genetic, hormonal and acquired conditions. Diagnostic workup of azoospermia includes personal and familiar history, clinical evaluation, hormonal and semen biochemical assessment, scrotal and distal seminal tract transrectal ultrasounds and invasive investigations such as testicular fine needle aspiration, open biopsy and, in selected cases, vasography. OA can be treated by surgical recanalization of the seminal tract or sperm retrieval for ART. When possible, recanalization of the seminal tract and restoration of spontaneous fertility is firstly indicated. Obstruction location and characteristics and partner age influence the choice of treatment.

Microsurgical Recanalization Of The Proximal Seminal Tract

This treatment is indicated in case of azoospermia, confirmed by at least two recent semen analysis and normal spermatogenesis at least on one side, documented by histology or testicular cytology. Microsurgical reconstruction (Vasoepididymostomy, Vasovasostomy) should be indicated as the first therapeutic option in azoospermia due to epididymal or vasal obstruction. In the majority of patients it consents the achievement of spontaneous pregnancies by avoiding ART techniques which carry high costs and invasivity to the female partner. In a recent revision of over 4000 operated cases, Silber reports patency and pregnancy percentages after microsurgical reconstruction at, respectively, 96% and 81% (vasovasostomy) and 84% and 67% (vasoepididymostomy) (2). In vasovasostomy (Fig 1), the three main factors conditioning the success of reconstructive surgery are: a) Time lapsed from onset of obstruction (obstruction interval); b) Use of microsurgical or conventional surgical techniques; c) Presence of sperm and characteristics of fluid aspirated from the testicular end of the vas at surgery. As far as vasoepididymostomy is concerned, the recent introduction of simpler microsurgical anastomosis techniques has further improved results (3). In these techniques, two microsutures are passed in the epididymal tubule before opening it. Then the tubule is opened and the suture passed inside out of the vas lumen obtaining the invagination of the epididymal tubule in the vas (Fig. 2). This technique simplifies the somehow most demanding and difficult step of the procedure: the inner mucosal layer of the anastomosis.

When the female partner is older than 37 years there is, instead, a priority indication for immediate ICSI. This might also be associated with a simultaneous microsurgical recanalization of the seminal tract.

Recanalization Of The Distal Seminal Tract

Endoscopic resection of the ejaculatory ducts (TURED) or obstructing prostatic cysts is the treatment of choice in distal obstruction. This technique, recommended in the 2015 guidelines of the European Association of Urology (EAU), allows an improvement of seminal parameters and a natural pregnancy in approximately 60-70% and 25-30% of treated couples respectively (4). Best results are obtained in cystic obstructions. However, its indications have recently been reduced due to the introduction of less invasive techniques and the known possibility of negative postsurgical consequences such as urinary reflux in the

seminal tract during micturition.

In the presence of prostatic cysts obstructing the ejaculatory ducts but not communicating with the seminal tract, a recanalization is possible with a minimally invasive approach of transperineal ultrasound guided aspiration and sclerotization of the cysts with alcohol (TRUCA). Using this technique we have obtained a significant reduction of the cyst volume with a release of its compression on ejaculatory ducts and an improvement of the semen parameters in 75% of cases (5). Other recently proposed techniques for the treatment of ejaculatory duct obstruction include seminal tract washout and endoscopic dilation of the ED. Advantages of these technique and of the TURED must be balanced with those of immediate sperm retrieval for ART.

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Legends

Fig.1: Microsurgical vasovasostomy in two layers according to Silber

Fig.2: Microsurgical termino-lateral vasoepididymostomy (tubulo-vasostomy): simplified technique with invagination of the epididymal tubule according to Monoski. The two needles are passed in the epididymal tubule before opening it.

Fig.3: Ultrasound guided transperineal vesiculo-vasography by fine needle puncture of a median prostatic cyst communicating with the seminal tract



Fig.1

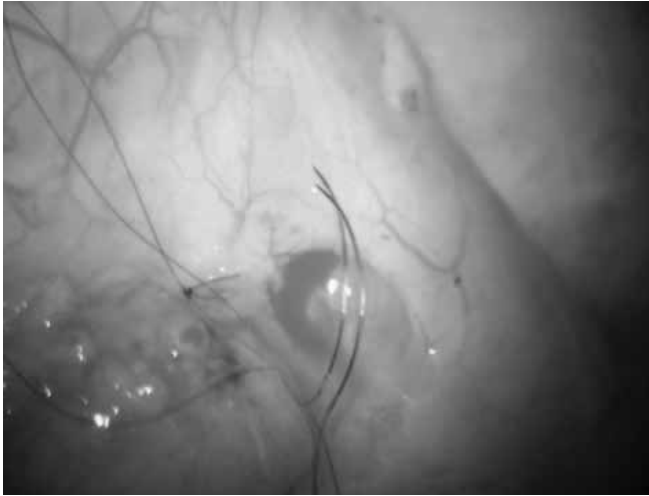


Fig.2

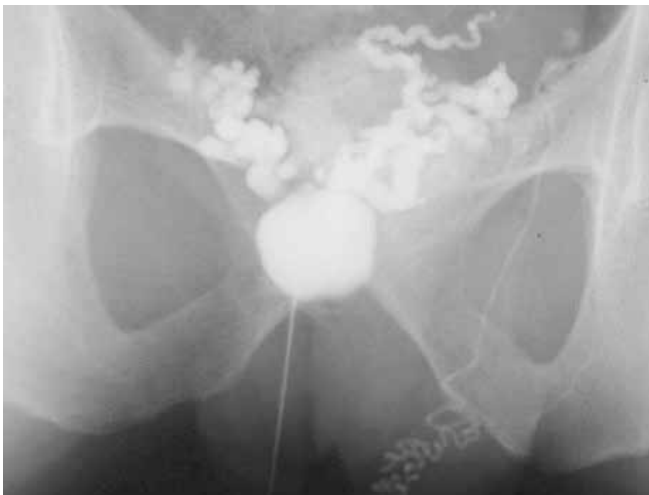


Fig.3

UPDATE ON SPERM RETRIEVAL TECHNIQUES / MICROTese FOR ART

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Introduction: Non-Obstructive Azoospermia (NOA) is managed by retrieval of testicular sperm to be used for ICSI. TeFNA and TESA, uncorrectly still used in many IVF Centers, are now virtually ignored by the EAU Guidelines, which report TESE as the recommended procedure in NOA (Jungwirth, 2015). In recent years, MicroTESE (MTESE), ideated by Schlegel (1999), is raising to the role of most appropriate testicular sperm retrieval technique in NOA, owing to its better sperm retrieval rate (SRR). Achieving this positive statement has been difficult, because MTESE requires microsurgical skills, uncommon among urologists. However, nowadays recourse to MTESE is increasing exponentially: not rarely for marketing reasons, since, as seen in many Internet videos, some operative details are far from the best.

Tese Versus Microtese: In NOA, TESE can have an acceptable SRR, depending on the number of samples (one: 44.5%; two: 51.4%; three: 56.1%; four: 58.4%)(Dadkhah, 2013): incisions, randomly performed with naked eye, can sever subalbugineal or lobular vessels, devascularizing testis lobules and increasing the risk of subsequent hypogonadism (Schlegel, 1997). MTESE, with expert's eyes, allows the identification of individual clumps of tubules (Silber, 2000) with better spermatogenesis, so maximizing sperm recovery, and the excision of single tubules, so providing the biologist with less testicular tissue to dissect in order to find sperms: in addition, the best visualization of the vessels allows optimal preservation of blood supply to the testis (Schlegel, 1999). Comparison between MTESE and TESE results showed higher SRRs with MTESE (42.9-63% vs 16.7-45%) in a metanalysis (Deruyver, 2013); a recent larger metanalysis (1890 pts.) by Bernie (2015) confirmed that MTESE SRR is 1.5 higher than TESE SRR (the latter being twice higher than TESA one). Superiority of MTESE SRRs was proven even in the different histopathological NOA patterns: 37% vs 14% in SCOS, 49% vs 27% in maturation arrest; 85% vs 73% in hypospermatogenesis (Deruyver, 2013). High MTESE SRRs were reported, too, in complicate NOA cases: e.g. due to chemotherapy (48%), previous cryptorchidism (64%), AZFc microdeletions (67%) (Dabaja, 2013), Klinefelter syndrome (Sabbaghian, 2014); and as a salvage procedure after TESE failure (45-46.5%)(Tsujiura, 2006; Ramasamy, 2007; Kalsi, 2014).

Surgical Technique and Our Improvements: By an incision in a poorly vascularized area, the testis is opened, 270° or more, along an equatorial or para-equatorial plane, gently and progressively, avoiding any parenchymal stretching. Following the distribution of the intratesticular vessels inside the septa (5 to 15x), a vast exposition of the seminiferous tubules is achieved. Respecting blood supply of lobules, and avoiding any rough disconnection of tunica albuginea (rich of easily bleeding vessels) are mandatory. A careful and fine microdissection allows to access to the deeper tubules of a lobule, and to some of more internal lobules. Operating with a microscope at 15–24x magnification (36x when needed) allows identification of any more opaque and larger tubules, those probably hosting mature spermatogenic cells. In many NOA testes, foci with residual spermatogenesis are heterogeneously distributed; therefore, microdissection must be extremely exploratory. In difficult cases, when no larger tubules are visible on the two surfaces of the shell-like opened testis, we insinuate our Vannas forceps more deeply along the septa, delicately detaching many lobules from the surrounding ones, almost reaching the opposite tunica albuginea, thoroughly probing the whole underlying parenchyma. The larger, or apparently larger, tubules are retrieved and passed to the biologist assisting the operation, for an immediate meticulous sperm search. At the end, testicular tissue is irrigated with Ringer solution plus gentamycin. Haemostasis is mainly performed by gentle pressure on the parenchyma for 3-4' using a gauze wet with antibiotic and, only if strictly necessary, using the bipolar thermal device (0.2 mm tip). Albugineal incision is repaired with continuous suture (Vicryl™ 4-0 or 5-0), ideally limited to the external half of its thickness, then followed by closure of tunica vaginalis, infusion of betamethasone solution into vaginal cavity to prevent pain and adhesions, and closure of dartos and skin. If surgery has been made meticulously, post-operative progress is actually painless, and any scar will become invisible at sonography three months later (Colpi, 2010).

Results: Success depends maximally on the microsurgeon's experience, because MTESE has a very long learning curve, with satisfying SRR beyond the first 100 cases (Ishikawa, 2010); Schlegel claims that SRR goes on improving very slowly until overstepping a 500 case-threshold, because eyes succeed in seizing even minimal differences in tubular diameter (Dabaja, 2013). In a prospective study in progress on 45 NOA patients, where in total we operated on 69 testes by MTESE (testis volume was 10-15 ml in 10 testes, 7-10 ml in 39, and <7 ml in 20; subsequent histology was complete SCOS in 50 testes, incomplete SCOS in 5, maturation arrest in 11, hypospermatogenesis in 2, intratubular neoplasia in 1) with a positive result in 27 patients [SRR 60%], we classified tubules into "dilated", "apparently dilated" (at 24x), and "not-dilated": we had a positive retrieval respectively in 19/21 testes with "dilated", in 7/19 testes with "apparently dilated", and in 2/29 testes with "non-dilated" tubules. We had a successful retrieval in 16/50 testes with complete SCOS.

Weak Points and Complications: Surgery duration of MTESE is much longer than TESE: 1.8 h (range: 0.5–6.6 h) in case of positive retrievals and 2.7 h (range 0.8–7.5 h) in case of negative retrievals (Ramasamy, 2011), therefore requiring usually general anesthesia and sometimes an overnight stay in hospital. In our series of 740 MTESE, the mean operative time for monolateral successful MTESE was 86.9' (range: 60-140'), and for bilateral successful or unsuccessful MTESE was 125.8' (range: 85-200'). Compared to multiple TESE, which is believed to be more dangerous for testis, due to possible blood supply lesions (Schlegel, 1997) or intratesticular edema or hematoma (Silber, 2000), MTESE is now considered the safer procedure, with a lower incidence of bleeding (Schlegel, 1999; Okada, 2002) and postoperative complications such as hematomas, fibrosis and reduced orchidometry, as assessed by sonography (Amer, 2000; Okada, 2002; Ramasamy, 2005; Deruyver, 2013). In our 740 MTESE, only one hematoma occurred (due to hemostasis during hypotensive state, not communicated by anesthesiologist, and successfully treated); no infection, no post-surgical testis hypotrophy or pain, not even in cases where we performed two MTESE on the same testis to increase parenchyma exploration. Furthermore, no differences versus TESE were shown about possible post-operative hypotestosteronemia (Okada, 2002; Ramasamy, 2005; Deruyver, 2013).

Relevant Considerations About Sperm Retrieval In Noa:

MTESE seems particularly helpful for the worst-case NOA scenarios (Ashraf, 2013; Esteves, 2015), and especially with high FSH (Ramasamy, 2009; Modarresi, 2015). Hormonal presurgical treatment is under debate. There is some evidence that a small percentage of men with azoospermia due to testicular failure may benefit from treatment of a clinical varicocele (Colpi, 2005; Inci, 2009; Weedon, 2010). In many NOA patients, an increased risk of CIS has been described (Jungwith, 2015): therefore, a tissue fragment, appropriately fixed in Bouin's solution, must be always read by an experienced pathologist (Dohle, 2012). About half of NOA patients are hypogonadic, and require endocrine post-surgical follow-up, and testosterone replacement when needed (Bobjer, 2012). The biological search for sperm in the minced tubules requires a well-trained biologist working in the theatre; an additional +7% success rate is reported when removed specimen exam is followed by a multi-hour, many-technician search in an experienced laboratory (Ramasamy, 2011). The laboratory management of these specimens requires special attention, because NOA spermatozoa are often compromised in quality and more fragile than ejaculated ones (Esteves, 2015). When only immotile spermatozoa are obtained after processing of fresh or cryo-thawed specimens, different methods (HOS test, sperm tail flexibility test, and pentoxifylline stimulation) can be used to differentiate live immotile from dead spermatozoa (Esteves, 2012). Vitricification seems to be a suitable method to cryopreserve sperms from poor positive retrievals (Endo, 2012). ICSI performed using fresh or cryo-thawed sperm seems to achieve similar results, whilst live birth rates are significantly lower in the NOA (21.4%) compared with OA (37.5%) patients (He, 2010; Esteves, 2013).

"The testicular sperm extraction procedure should be offered to all men with NOA, but should only be undertaken in a Centre with expertise in MTESE and where an ICSI Laboratory with expertise in handling these samples is available" according to the Canadian Guidelines (Jarvi, 2015).

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Fig. 1: Sometimes dilated tubules can be easily identified, even at lower magnification.
 Fig. 2: Other times tubular dilation can be identified only at higher magnification.

Figure 1

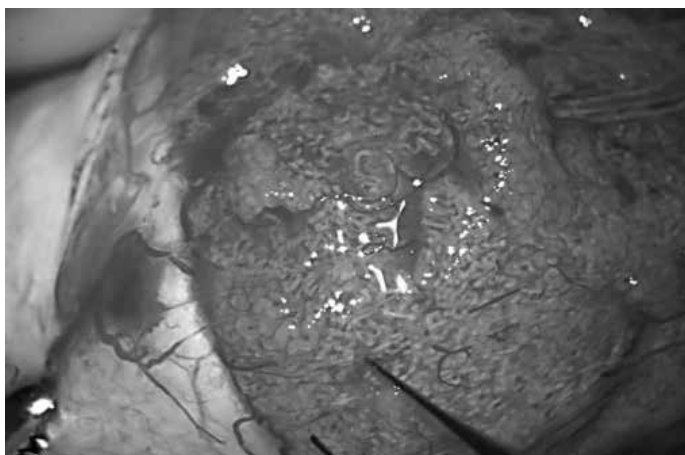
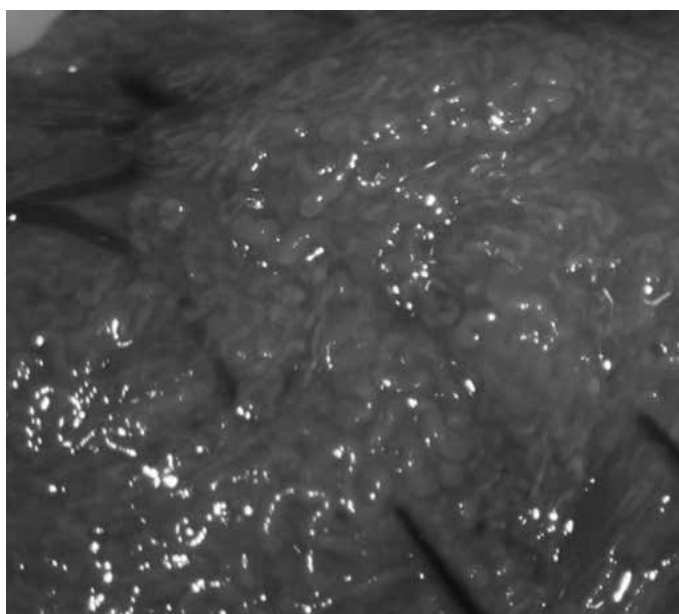
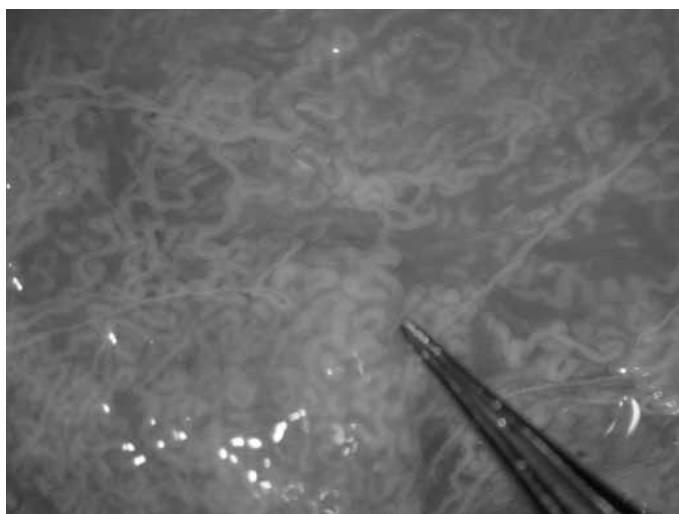


Figure 2



CHALLENGING CASES IN MALE INFERTILITY

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Panelists: Andrea Salonia (Italy), Ahmad Shamsodini (Quatar), Baris Altay (Turkey), Carlo Bettocchi (Italy)



Challenging Cases In Male Infertility

Moderator:

Ateş Kadioğlu, Turkey

Panelists:

Andrea Salonia, Italy
Ahmad Shamsodini, Quatar
Barış Altay, Turkey
Carlo Bettocchi, Italy

Case 1

- 28 years old male
- Infertility (2 years)
- Female factor (-)
- PE
 - Right testis: 18 cc,
 - Left testis: 16 cc
 - Palpable vas deferens
 - Left varicocele: Grade 3

Which diagnostic tests?

- Semen analysis (2)
- Scrotal Doppler US

EAU male infertility guideline 2015

- Semen Analysis
 - SA1: 2.6cc / 4.3 M / 30%
 - SA2: 2.8cc / 4 M/ 24%
 - Total motile sperm count: 3.3 M
 - Strict Morfology: %2
 - Dilatation of pampiniform plexus of the left testis (5 mm), reflux +

Treatment

- ICSI
- IUI
- Left microscopic varicocelectomy
- Medical treatment

- SA (3 mo later) → 2.0cc / 6.0 mil / %33, Pregnancy(-)
- SA (6 a mo later) → 2.3 cc / 7 mil / %28, Pregnancy(-)
- SA (12 mo later) → 2.3cc / 6.5 mil / %30 , Pregnancy(-)
- Total motile sperm count: 4.4 M
- Morfology: %4
- Right testis 18 cc, Left testis 17 cc

Any Alternatives?

- Assessment of recurrent varicocele
- Patients should be evaluated after varicocele treatment for persistence or recurrence of the varicocele.

Report on varicocele and infertility: ASRM committee opinion, VOL. 102 NO. 6 / DECEMBER 2014

Surgical Techniques

Treatment	Ref.	Recurrence/persistence %	Complication rates
Antegrade sclerotherapy	18	9	Complication rate 0.3-2.2%; testicular atrophy, scrotal haematoma, epididymitis, left flank erythema
Retrograde sclerotherapy	18	9.8	Adverse reaction to contrast medium, flank pain, persistent thrombophlebitis, vascular perforation
Retrograde embolization	20,21	3.8-10	Pain due to thrombophlebitis, bleeding haematoma, infection, venous perforation, hydrocele, radiological complication (e.g., reaction to contrast media), misplacement or migration of coils, retroperitoneal haemorrhage, fibrosis, ureteric obstruction
Open operation			
Scrotal operation		-	Testicular atrophy, arterial damage with risk of devascularisation and testicular ischaemia, scrotal haematoma, postoperative hydrocele
Inguinal approach	22	13.3	Possibility of missing out a branch of testicular vein
High ligation	23	29	5-10% incidence of hydrocele (> 1%)
Microsurgical inguinal or sub-inguinal	24,25	0.8-4	Postoperative hydrocele, arterial injury, scrotal haematoma
Laparoscopy	26,27	3-7	Injury to testicular artery and lymph vessels; intestinal, vascular and nerve damage; pulmonary embolism; peritonitis; bleeding; postoperative pain in right shoulder (due to diaphragmatic stretching during pneumoperitoneum); pneumothorax; wound infection

EAU male infertility guideline 2015

The Incidence of Recurrent Varicocele

- N:4 studies retroperitoneal high ligation (Palomo):14.97% (7%-35%).
- N:10, microsurgical approach (6 sub-and 4 inguinal): 1.05% (0%-3.57%).
- N:2, macroscopic inguinal or sub-inguinal:2.63% (0%-37%)
- N:5, laparoscopic approach:4.3% (2.17%-7.14%)
- N: 2 radiologic embolization 12.7% (2%-24%)

Katherine Rotker, Mark Sigman, Asian Journal of Andrology (2016) 18, 1-8

Any Alternatives?

- Assessment of recurrent varicocele
- Recurrent Vx (-)

Any Alternatives?

- Assessment of recurrent varicocele
- Assisted reproductive technology (ART)
- IUI
- ICSI

- Average pregnancy rate of approximately 13% per cycle for IUI
- For ICSI: 33%
- Strict sperm morphology $\leq 4\%$ is not associated with lower PRs in couples undergoing IUI, and thus should not be the sole reason for advancing to IVF

Fertil Steril. 2014 Dec;102(6):1584-90.e2.

- Does varicocelectomy effect of ART outcomes?

Outcome of assisted reproductive technology in men with treated and untreated varicocele: systematic review and meta-analysis

Sandoo C Esteves^a, Mathieu Rouget^a, Ashok Agarwal^a

- 4 studies
- Overall 870 ICSI cycles
- 438 with prior varicocelectomy,
- 432 without prior varicocelectomy

Table 3: Characteristics of the included studies

Study	Design	ICSI cycles with prior varicocelectomy (n)	ICSI cycles without prior varicocelectomy (n)	Outcomes included in the review
Edwards et al. ²⁸	Retropective	80	110	Live birth, clinical pregnancy, miscarriage, and fertilisation rates
Panagiotou et al. ²⁹	Retropective	140	70	Clinical pregnancy, miscarriage, and fertilisation rates
Morales et al. ³⁰	Retropective	23	55	Live birth, clinical pregnancy, and fertilisation rates
Gilbert et al. ³¹	Retropective	148	138	Live birth, clinical pregnancy, and miscarriage rates

ICSI, intracytoplasmic sperm injection.

Asian Journal of Andrology (2016) 18, 1-5

Educational Aspect of case

- Varicocele improves semen parameters in patients with clinical palpable varicocele and abnormal semen parameters
- Pregnancy and child birth rate is increased after varicocele in patients who were candidate for ART
- Varicocele increases the chance of sperm in ejaculate and outcomes of m-TESE in patients with obstructive azoospermia
- Micro-surgical varicocele is the best treatment option for preventing recurrent varicocele compared to others

Case 2

- 18 years old male
- Klinefelter Syndrome
- Non-mosaic 47,XXY
- Y chromosome deletion (-)
- Single
- No morbidities
- PE
 - Right testis: 3 cc,
 - Left testis: 2 cc
 - Palpable vas deferens
 - Varicocele(-)
 - Penis length: 11.5 cm

- Assessment for his fertility potential

Which diagnostic tests?

- Semen analysis (2)
- FSH-T

EAU male infertility guideline 2015

Semen analysis

- 2.5 cc/azoospermia/pellet (-)
- 3 cc/azoospermia/pellet (-)

Hormonal evaluation

- FSH: 13 mIU/ml (1.5-12.4 mIU/ml)
- LH: 11 mIU/ml (1.7-8.6 mIU/ml)
- Testosterone: 228 ng/dl (300-900 ng/dl)

Diagnosis

- Non-obstructive azoospermia

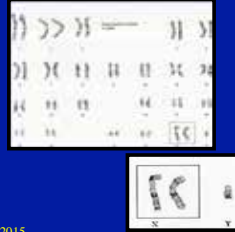
- Which treatment option should be recommended for infertility?

Treatment

- Testicle Bx + sperm cryopreservation
- Conventional TESE + sperm cryopreservation
- Unilateral Micro-TESE + sperm cryopreservation
- Testosterone replacement therapy (TRT)
- TRT + Micro-TESE + sperm cryopreservation

Klinefelter Syndrome

- Most common chromosomal abnormality in pts with infertility
- 11 % with azoospermia
- %80 47,XXY nonmozaik,
- %20 46,XY/47,XXY mozaik
- 48,XXXY- 48,XXYY 50.000/1



EAU Male infertility Guidelines.2015
AUA Male infertility guidelines 2010
Paduch DA, et al.Semin Reprod Med.2009
Frühmesser/Kotzot et al Sex Dev 2011;5:109–123

Preliminary Results of a Prospective Study of Testicular Sperm Extraction in Young Versus Adult Patients With Nonmosaic 47,XXY Klinefelter Syndrome

Ingrid Flotton, Sandrine Giscard d'Estaing, Beatrice Cuzin, Aurélie Brosse, Medhi Benchaib, Jacqueline Lornage, Fléni Ecochard, Frédérique Dijoud, Hervé Lejeune, and FERTIPRESERVE group

- N: 41 Pts with KS:Bilateral open testicular bx
- N: 25 young group (15-22 years), SRR:13/25(52%)
- N: 16 adult group (n>22 years), SRR:10/16(62.5) NS (P = .73).
- Mean ages for TESE(+): 24.3 ± 7.4 years
- Mean ages for TESE(-): 23.7 ± 7.4 years (P = .42).
- Previous T (+), SRR:9/17 = 52.9%
- Previous T(-), SRR:14/24 = 59.1% (P = .98).
- Younger age and t replacement did not increased SRR

J. Clin. Endocrinol. Metab. March 1, 2015. Volume 100, Issue 3; Pages 961-7

Sperm Retrieval in Adolescents and Young Adults with Klinefelter Syndrome: A Prospective, Pilot Study

Leena Nahata, MD^{1,*}, Richard N. Yu, MD, PhD^{2,*}, Harriet J. Pattel, MD³, Jeanne S. Chow, MD³, Tanya Logvinenko, PhD^{2,4},
Elina Rosoklija, MPH², and Laurie E. Cohen, MD⁵

N: 15 KS with azoospermia (Age: 15-23)

N: 10 Unilateral m-TESE

Subject	Age (yr)	8 female (10%)	1 female (10%)	PMR	L/R	Verbal/Nonverbal	Indices 8	Motorical status	100% response rate
1	19	2	2	2.81	30.53	23.80	286	<+10	
2	27	2	2	2.96	29.48	27.58	286	<+10	
3	15	1	1	4.65	25.18	23.07	407	<+10	Yes/no
4	21	1	1	2.96	30.44	25.64	286	<+10	Yes/no
5	18	1	1	1.77	31.36	28.39	425	<+10	Yes/no
6	20	1	1	1.76	31.20	28.28	425	<+10	Yes/no
7	23	2	2	4.07	31.37	28.66	367	<+10	Yes/no
8	20	1	1	1.80	30.55	27.43	274	<+10	Yes/no
9	20	1	1	3.22	30.00	27.00	354	<+10	Yes/no
10	18	1	1	1.99	31.95	28.47	363	<+10	Yes/no
11	18	1	1	1.85	33.42	29.39	407	<+10	Yes/no
12	16	1	1	1.76	33.64	29.38	271	<+10	Yes/no
13	18	1	1	2.25	33.45	29.35	375	<+10	Yes/no
14	19	1	1	2.70	30.25	27.28	388	<+10	Yes/no
15	17	1	1	3.74	31.7	28.38	370	<+10	Yes/no

- No hormonal treatment prior to surgery
- Sperm retrieval rate : 5 pts (50%)

(J Pediatr 2015)

- 10 Pts with Klinefelter's Syndrome
- Average age: 15.5(14 to 22 years)
- T <350 ng/dL treated with topical T therapy (least 1 year before surgery)
- SRRs: 7/10 (70%)
- Testicular volume, age, or duration of hormone therapy did not predict sperm retrieval



A Mehta, PN. Schlegel, Fertility and Sterility® Vol. 100, No. 4, October 2013

- Exogenous T therapy, in combination with aromatase inhibition, not suppress spermatogenesis.

Patient	Age at test (y)	Testis volume (cm ³)	Duration of hormone therapy (mo)	Total T (ng/dL)		LH (mIU/mL)		FSH (mIU/mL)		Sperm retrieved
				Base	Pre-op	Base	Pre-op	Base	Pre-op	
1	14	3	15	161	345	1.8	12.1	17.6	38.6	Yes
2	14	2.5	40	253	45	3.9	17.3	8.3	34.3	No
3	16	10	14	214	360	12	7.4	22	20.2	Yes
4	15	3.5	34	895	895	19	8.6	8.1	16.7	Yes
5	15	3.5	22	210	673	20.4	16.5	47.3	40.1	Yes
6	14	6	12	57	126	1.0	6.3	2.4	31.1	No
7	16	2	12	179	746	25.1	24.6	40.7	27.9	Yes
8	16	2.5	3450	355	744	48	34.1	34.1	45.1	Yes
9	14	7	30	229	513	18.6	4.7	1.4	4.7	Yes
10	15	3.4	35	236	513	0.4	4.1	1.2	15.3	No

A Mehta, PN, Schlegel, Fertility and Sterility® Vol. 100, No. 4, October 2013

- Testicle Bx: Sperm(-)

Further Treatment Options

- Bilateral micro- TESE+ sperm cryopreservation
- Unilateral micro-TESE+ sperm cryopreservation
- TRT+ Micro-TESE+ sperm cryopreservation
- Re-evaluation after six mo.

- 10 years after testicle biopsy
- He got married
- Infertility
- No female factor
- 2.5 cc/azoospermia/pellet (-)
- 3 cc/azoospermia/pellet(-)
- FSH: 44 mIU/ml (1.5-12.4 mIU/ml)
- LH: 16 mIU/ml (1.7-8.6 mIU/ml)
- Testosterone: 270 ng/dl (300-900 ng/dl)

Treatment

- Testicle Bx + ICSI
- Conventional TESE + ICSI
- Unilateral Micro-TESE+ ICSI
- Bilateral Micro-TESE+ ICSI
- TRT+ Bilateral Micro-TESE+ ICSI

Klinefelter's Syndrome-SRRs

- SRR :65%
- Clinical pregnancy and fertility 40%
- FSH, LH and testicular volume had no predictive for SRR
- Respond preoperative medical treatment is predictive for SRR
- Young pts SRR☑
- m-TESE SRR☑(%67& 42)

Publications	Patients (n)	Success rate	Liveborn children (n)
TESE			
14 publications, 1997-2010	332	140 (42%)	50 (15%)
Micro TESE			
8 publications, 2005-2012	409	234 (67%)	83 (20%)

I. Plotton et al. / Annales d'Endocrinologie 75 (2014) 118-125
Ali A Dabaja and Peter N Schlegel-Asian Journal of Andrology (2013) 15, 35-39

Preoperative Medical Treatment-SRRs

- Respond medical therapy,
- SRRs (T>250 ng/dl):72%
- Non-respond medical therapy, SRRs:55%

	No.
Anastrozole	180
Anastrozole + hCG	29
Climophene citrate	66
Testolactone	14
Testolactone + hCG	12
hCG	9
Other combinations/unknown	38

Ali A Dabaja and Peter N Schlegel-Asian Journal of Andrology (2013) 15, 35-39

- N: 134 KS, mTESE
- N:537 NOA and normal karyotyp m-TESE
- No hormonal treatment before surgery

Factor	Total	Success	Failure
Klinefelter syndrome			
Age (y)	32.64 ± 0.48*	30.0 ± 0.65	33.68 ± 0.6
FSH (mIU/mL)	34.52 ± 1.4*	34.09 ± 2.52	34.44 ± 1.58
LH (mIU/mL)	12.80 ± 1.36*	12.56 ± 1.84	13.26 ± 1.34
T (ng/mL)	2.65 ± 0.22	3.4 ± 0.48*	2.33 ± 0.23
Control			
Age (y)	34.11 ± 0.27	34.6 ± 0.65	33.93 ± 32
FSH (mIU/mL)	22.6 ± 0.83	23.54 ± 1.55	22.22 ± 0.96
LH (mIU/mL)	8.83 ± 0.41	9.22 ± 0.85	8.67 ± 0.47
T (ng/mL)	4.04 ± 0.51	3.52 ± 0.29	4.2 ± 0.67

Parameter	Klinefelter Syndrome	Control	P Value
Sperm retrieval rate	38 (28.4%)	119 (22.2%)	.13
No. of ICSI cycles	18	64	-
Fertilization rate	28%	21%	.046
No. of embryos transferred (mean ± SE)	1.72 ± 0.21	2 ± 0.11	.218
Live birth rate/ embryo transfer	13%	3%	.05

- Positive Predictive factor for SRR: age and preop testosterone level

Sabbaghian M, UROLOGY 83:107e110, 2014

Outcome of testicular sperm extraction in nonmosaic Klinefelter syndrome patients: what is the best approach?

A. Majzoub¹, M. Arafat², S. Al Said³, A. Agarwal³, A. Seif², A. Al Naimi³ & H. El Bardisi¹

- N: 43 KS
- N: 20 m-TESE
- N: 23 conventional TESE
- Overall SRR: %13.9 (6/43)
- m-TESE:6/20
- C-TESE:0/20
- Preoperative testosterone,
- Using aromatase inhibitor
- To perform micro-TESE significantly higher SSR.

	Sperm retrieved (n = 6)	No sperm retrieved (n = 37)	P-value
Age, years (mean ± SD)	31 ± 6.8	33.2 ± 6.3	0.42
Testicular volume, mL (mean ± SD)	4.3 ± 1.7	4.1 ± 1.2	0.68
FSH, mIU/L (mean ± SD)	74.5 ± 33.7	79.4 ± 46.5	0.81
LH, mIU/L (mean ± SD)	18.5 ± 8.5	20.5 ± 4.6	0.42
FSH, IU/L (mean ± SD)	51.5 ± 11.4	32.4 ± 10.2	0.83
Testosterone, nmol/L (mean ± SD)	292.5 ± 119.1	254.4 ± 127.7	0.12
Testosterone, nmol/L (mean ± SD)	15.6 ± 3.1	9.36 ± 4.7	0.003
Method of sperm retrieval, n (%)			
Micro-TESE	6 (100)	14 (38)	0.006
Conventional TESE	0 (0)	23 (62)	
Medical treatment in micro-TESE group (n = 20, n (%))			
Anastrozole (n = 10)	6/10 (27.6)	5/10 (50)	0.06
Climophene citrate (n = 10)	1/10 (10)	5/10 (50)	
hCG (n = 10)	0/10 (0)	5/10 (50)	
No treatment (n = 4)	0/4 (0)	4/4 (100)	

Andrologia 2015, 1-6-A. Majzoub et al.

Natural Course of patients with KS

- At the beginning of puberty, testicular growth and testosterone levels are normal.
- At mid-puberty, testicular growth stops, at 15 years old, testosterone levels are at the lower limit of normal range of normal men
- During adolescence and in adulthood, testes become small and firm with more or less intense signs of hypogonadism
- >25 age: 70% pts, libido☑ and ED (+)

I. Plotton et al. / Annales d'Endocrinologie 75 (2014) 118-125

Severe oligospermia:

- Lanfranco et al: 8.4% (11/131),
- Kitamura et al: 7.7% (4/52) and
- Aksglaede et al: 4.2% (2/47)
- Giving a percentage of oligospermia of 7.4% on average.

I. Plotton et al. / Annales d'Endocrinologie 75 (2014) 118-125

Educational Aspect Of Case

- Klinefelter patients may have sperm in the ejaculate during puberty
- In patients with no sperm testicular biopsy should be performed
- If negative biopsy patients may undergo m-TESE at the time of ART
- The effect of hormonal therapy prior to surgery is controversial

Case 3

- 36 yrs male
- Female age 36
- 6 yrs primary infertility
- Physical examination
- Right testis:23 cc left testis:22 cc
- Vasa deferentia are palpable on both sides
- No varicocele

- Semen analysis:
3.9 cc/18.000.000/62% (Morphology 0%)
2.5 cc/17.000.000/56% (Morphology 0%)
Round acrosomeless sperms in morphology

FSH: 2.6 mIU/ml

T: 5.3ng/ml

Diagnosis

- Globozoospermia



L. Chansel-Debordeaux et al.-Andrology, 2015, 3, 1022–1034

Globozoospermia

- Rare type of teratozoospermia
- <0.1% of infertile males
- Type I complete absence of acrosome
- Type II acrosomal remnants

- Main characteristics of globozoospermia
- Lack of acrosome
- Round Sperm

other abnormalities

- lack of post-acrosomal cap
- abnormalities in nuclear membrane
- presence of coiled flagella
- abnormalities in nuclear maturation and in chromatin
- Condensation
- disorganization of mitochondria in the transitional piece
- abnormalities in the axoneme
- presence of cytoplasmic rest.

L. Chansel-Debordeaux et al.-Andrology, 2015, 3, 1022–1034

Perrin A et al Andrologia 2013 ;45:1-9

Globozoospermia

- Acrosomeless spermatozoa can't go through zona pellucida and fuse with oocyte
- Infertility is due to the lack of oocyte activation capacity in sperm



Perrin A et al Andrologia 2013 ;45:1-9

Globozoospermia and Genetics

- Familial transition
- Possible genes (mice):
 - CSNK2A2 (Casein kinase 2)
 - HRB (HIV-1 Rev-binding protein)
 - GOPC (Golgi associated PDZ)
 - PICK1 (protein interacting with C kinase 1)
- Genome scan results:
 - SPATA16 (spermatogenesis associated protein 16)
-Chromosome 3q26.32
 - PICK 1 gene
-22q12.3-q13.2
 - DPY19L2
-12q14.2 (most prevalent)

PICK 1 and SPATA16 is related to the transfer of proacrosomal granules from Golgi

Perrin A et al Andrologia 2013 ;45:1-9

DFI and TUNEL Assay

References	No. of sperms	No. of spermatozoa	SDF fragmentation index		P-value
			Tamara	Control	
Barakat et al. (1996)	NA	NA	100%	0.1%	
Levashin et al. (2001)	1	NA	15%	1%	10
Alcaraz et al. (2002)	1	NA	23.5%	22.3%	$P < 0.0001$
Torres et al. (2008)	1	NA	41.7% ^a	35%	
Aguiar et al. (2009)	1	NA	95.10%	49.1%	$P < 0.0001$
Torres et al. (2010)	1	225	22.2%	21.15%	
Brufkin et al. (2011)	1	500	40%	12.0-12%	$P < 0.0001$
Stavitskiy et al. (2011)	1	1000	40%	12.0-12%	$P < 0.0001$
Nemethy et al. (2012)	1	500	40%	4%	$P < 0.0001$
Perez et al. (2015)	1	500	100%	3.2%	$P < 0.0001$
Choi et al. (2011)	1	100	0.0%	+	
Choi et al. (2011)	1	1000	0.0%	+	
Choi et al. (2011)	1	500	10%	+	
Choi et al. (2011)	1	1000	10%	+	
Choi et al. (2011)	1	500	1%	+	
Choi et al. (2011)	1	500	1%	+	

NA, not available
 +GJA and COMET assays
 a sperm chromatin texture and oligonucleotide terminal
 deoxynucleoside transferase

- Higher DFI values than fertile controls (>13%)

Perrin A et al Andrologia 2013 ;45:1-9

n Treatment


- n Donor sperm
- n Adoption
- n TESE+ICSI
- n MicroTESE+ICSI
- n ICSI+/- genetic counseling

PGD

- Genetic counseling should be offered and strongly recommended to evaluate the risk of transmitting a chromosomal disequilibrium or a genetic mutation for couples undergoing microinjection.

J. Chansel-Debordeaux et al. - Andrology 2015; 3: 1022–1034

FISH Test

- FISH sperm test
 - Sperm aneuploidy 
- Why?
 - Increased aneuploid sperm frequency (46%) in some studies
 - Similar to rates of other oligoasthenoteratozoospermic patients in literature

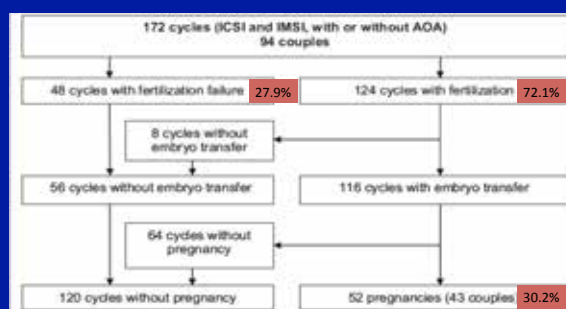
Globozoospermia and ICSI

- ICSI is the only option for pregnancy in these patients
- Fertilisation rates of ICSI severely reduced (0-72%) in comparison with general population

J. Chansel-Debordeaux et al. - *Andrology* 2015, 3, 1022–1034

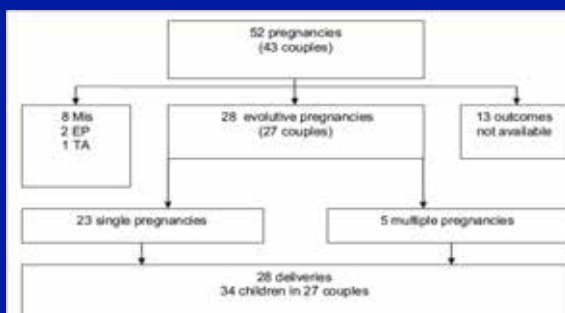
Perrin A et al Andrologia 2013 ;45:1-9

Results of in vitro fertilization (IVF) attempts(1994-2015)



L. Chansel-Debordeaux et al.-Andrology, 2015, 3, 1022–1034

Globozoospermia and pregnancy outcomes(1994 -2015)



L. Chansel-Debordeaux et al.-Andrology, 2015, 3, 1022–1034

Any Alternatives?

- ICSI+OAC (oocyte activation by calcium ionophore)
 - Ca flux requirement for oocyte activation
 - Higher fertilisation rate (56-100%)
- IMSI (intracytoplasmic morphologically selected sperm injection)
 - Under 10.000x magnification 1% spermatozoa with a bud of acrosome
 - Higher fertilisation rates (60%)
- IMSI+OAC: 66% fertilisation rate

Sermondale N et al Hum Reprod 2011 26:2944-2949
Perrin A et al Andrologia 2013 :45:1-9

ICSI attempts associated with AOA

[illegible]

Educational Aspect Of Case

- ICSI is the only option for pregnancy in these patients
- Genetic counseling should be offered
- Thorough ICSI+OAC (oocyte activation by calcium ionophore) and IMSI (intracytoplasmic morphologically selected sperm injection) can be increased outcomes.



XI. EURASIAN ANDROLOGY SUMMIT & 18TH ESSM JOINT MEETING





XI. EURASIAN ANDROLOGY SUMMIT & 18TH ESSM JOINT MEETING



*Discussed
Poster Presentation*

TP - 01

PREMATURE EJACULATION IS ASSOCIATED WITH HORMONAL ACTIVITY ACCORDING TO TWO DIFFERENT DIAGNOSTIC METHODS

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INTRODUCTION: Premature ejaculation (PE) is the most frequent male sexual disorder. Hormonal controls of ejaculation have not been exactly elucidated. Pituitary, thyroidal, adrenal and gonadal hormones might control ejaculation at various levels. The aim of our study is to investigate the role of hormonal factors in patients with PE.

MATERIALS-METHODS: 102 sexual active men who were consulted our out patient clinics with PE and other reasons between May 2014 and June 2015 were included in the study. All of the patients included in the study consisted of lifelong PE. Patients with a medication history due to PE, neuropathic or psychological disease and hypogonadism were excluded from the study. Two different methods were used for the diagnosis of PE. In one the diagnosis of PE was confirmed based on the stopwatch measurement to monitor the intravaginal ejaculatory latency time (IELT); those with average last 3 IELT values lower than 60 s were diagnosed with the condition (58 with PE, 44 without PE). In other one premature ejaculation diagnostic tool (PEDT) were used. Men with PEDT scores ≥ 11 were classified as having PE (63 with PE, 39 without PE). Serum levels of follicle stimulating hormone (FSH), luteinizing hormone (LH), prolactin, total testosterone, free testosterone, thyroid-stimulating hormone (TSH), free triiodothyronine (T3) and thyroxine (T4) were measured in patients as well as controls.

RESULTS: The examination which was used the IELT values, age was significantly higher and TSH, prolactin levels were significantly lower in men with PE ($p=0.004$, 0.023 , 0.021 , respectively). The examination which was used the PEDT scores, age was significantly higher and TSH, LH, prolactin levels were significantly lower in men with PE ($p=0.026$, 0.017 , 0.007 , 0.007 , respectively) (Table 1,2). Followed by multivariate logistic regression analysis was performed. According to IELT values age is an independent risk factor and according to PEDT scores age and LH level are an independent risk factors for PE.

CONCLUSION: Our study showed that hormonal activity is associated with PE which diagnosed by two different diagnostic methods. Patients with PE have lower LH, TSH, prolactin levels compared with normal men.

Keywords: Male sexual dysfunction, premature ejaculation, hormone,

Clinical and laboratory features in men according to IELT values.

	IELT ≤ 60 seconds Med. ± sd / n-%	IELT > 60 seconds Med. ± sd / n-%	p
Age	43,6±12,0	37,0±10,2	0,004
BMI	27,0±4,6	27,5±5,1	0,846
Cigarette	28 - 50,9%	24 - 51%	0,988
Alcohol	6 - 10,9%	5 - 11%	0,965
IIEF score	24,7±3,6	26,3±3,4	0,021
Glucose	114,8±46,0	96,4±9,6	0,357
BUN	13,3±3,5	12,2±2,8	0,216
Creatinine	0,8±0,1	0,9±0,1	0,220
Total Cholesterol	181,2±44,9	181,0±40,6	0,812
LDL	112,7±32,2	117,4 ±34,7	0,521
HDL	41,7±9,7	42,5 ± 9,6	0,610
Triglycerides	169,3±161,3	157,8±80,0	0,610
Free T3	3,5±0,6	3,6±0,4	0,089
Free 4	1,3±0,2	1,3±0,1	0,506
TSH	1,7±1,4	2,1±1,1	0,023
FSH	6,9±6,4	6,6±6,0	0,235
LH	6,2±2,8	5,8±2,3	0,415
Prolactine	9,5±6,2	11,3±5,1	0,021
Total Testosterone	4,4±1,8	4,4±1,4	0,791
Free Testosterone	12,1±4,1	12,5±3,4	0,452

Clinical and laboratory features in men according to PEDT scores.

	PEDT score ≥ 11 Med. ± sd / n-%	PEDT score < 11 Med. ± sd / n-%	p
Age	42,6±11,8	37,3±10,7	0,026
BMI	26,6±4,2	27,7±5,0	0,333
Cigarette	32 - 50,8%	20 - 51%	0,962
Alcohol	8 - 12,7%	3 - 8%	0,428
IIEF score	25,2±3,7	25,7±3,5	0,491
Glucose	113,4±43,4	95,0±8,0	0,162
BUN	13,1±3,4	12,4±3,0	0,322
Creatinine	0,8±0,1	0,9±0,1	0,186
Cholesterol	180,2±43,4	182,7±42,3	0,635
LDL	112,8±31,1	118,2±36,7	0,517
HDL	41,2±9,3	43,5±10,0	0,219
Triglycerides	169,9±157,8	154,4±63,4	0,474
Free T3	3,5±0,6	3,6±0,4	0,067
Free T4	1,3±0,2	1,3±0,1	0,251
TSH	1,7±1,4	2,1±1,2	0,017
FSH	7,6±7,1	5,5±3,9	0,054
LH	6,5±2,8	5,2±2,0	0,007
Prolactine	9,5±6,1	11,6±5,0	0,007
Total Testosterone	4,4±1,7	4,5±1,5	0,598
Free Testosterone	12,3±4,0	12,2±3,3	0,920

TP - 02

THE ROLE OF APOPTOSIS AND THE EFFECT OF EPIDERMAL GROWTH FACTOR (EGF) ON PRO-APOPTOTIC BNIP-3 IN AN EXPERIMENTAL RAT PRIAPISM MODEL

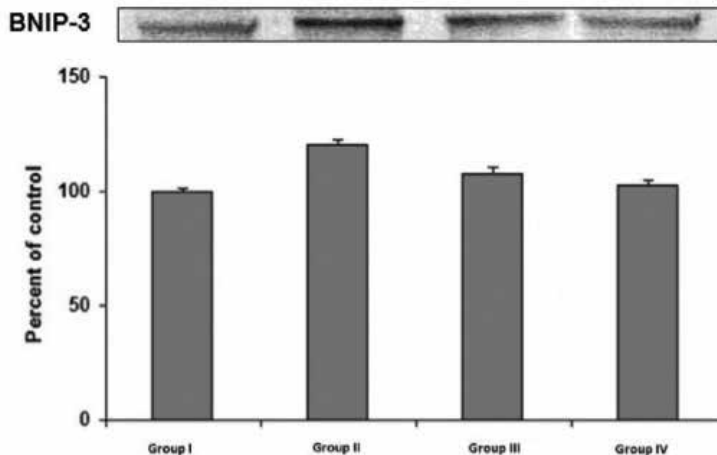
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OBJECTIVE: To investigate the effects of apoptosis inducing Bcl-2/adenovirus E1B 19 kDa-interacting protein 3 (BNIP3) and anti-apoptotic epidermal growth factor (EGF) on the pathophysiology of experimental low – flow priapism.

MATERIAL-METHODS: An experimental ischemic priapism model was constituted in 24 adult Sprague-Dawley rats. They were divided into four equal groups. Group I was the control group. Ischemic priapism was induced for 4 hours in Group II rats. In Group III, intraperitoneal (i.p.) 10 mcg/kg EGF was given for 7 days before induction of ischemic priapism for 4 hours. Group IV rats were given 20 mcg/kg EGF i.p. The control rats were decapitated after the end of spontaneous erection and the others were cervical dislocation after an ischemic priapism for 4 hours and their penises were removed en bloc. Western Blot method was used to determine BNIP3 expression level and TUNEL method was used to determine the apoptotic cells in the cavernosal tissue samples.

RESULTS: The highest BNIP3 level was determined in Group II (120.7 ± 1.68) and the lowest one in Group IV (102.9 ± 1.56). Although BNIP-3 expression levels were significantly higher in all three study groups compared to the controls, BNIP3 was significantly higher in EGF administered groups when compared to Group II ($p < 0.05$). With regard to apoptosis, the lowest apoptosis rate was seen in Group IV.

CONCLUSION: Decreased apoptosis in cavernosal tissues obtained by antagonizing the apoptotic effect of BNIP3 with EGF may provide development of new conservative treatment methods via those pathways.



TP - 03

TREATMENT SATISFACTION OF TADALAFIL, INTRACAVERNOSAL INJECTION AND PENILE PROSTHESIS ON SEXUAL FUNCTION

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OBJECTIVE: To compare patient satisfaction with Tadalafil, intracavernosal injection and penile prosthesis in patients with erectile dysfunction.

MATERIAL AND METHODS: A total of 1376 men with erectile dysfunction (ED) evaluated retrospectively. Men over 18 years old and erectile dysfunction due to organic aetiology were enrolled to this study. Two hundred and three patients who received Tadalafil 20 mg for 12 weeks two times in a week, 76 patients who received intracavernosal injection (ICI) therapy (Bi-mix; papaverine and phentolamine) and 22 patients with penile prosthesis implantation (PPI) were evaluated. Patients were assessed with International Index of Erectile Function (IIEF) and Erectile Dysfunction Inventory of Treatment Satisfaction (EDITS) questionnaire, to compare patient and also partner satisfaction.

RESULTS: Mean age was 45.2 (32-71). The etiology of ED was diabetes mellitus in 133 (44%) and radical prostatectomy in 121 patients (40%). The mean IIEF score improvement after the treatment was higher in PPI group (12.4 ± 1.3) than Tadalafil (6.2 ± 1.5) and ICI group (8.4 ± 3.2). The EDITS score was 78.2 ± 11.3 in PPI group while 60.3 ± 6.3 in ICI group and 70.7 ± 3.4 in Tadalafil group. Partners EDITS scores were 70.1 ± 10 in PPI group, 50.2 ± 1.5 in ICI group and 61.3 ± 5.3 in Tadalafil group. ($p < 0.01$)

CONCLUSION: Treatment modalities for erectile dysfunction are patient-based. The results of our study showed that the most satisfied treatment due to EDITS score for patients and partners was PPI.

Keywords: Tadalafil, intracavernosal injection, penile prosthesis, erectile dysfunction

TP - 04

EVALUATION OF THE SEXUAL FUNCTIONS OF THE SPOUSES ACCORDING TO THE BODY MASS INDEX BEFORE AND AFTER THE TRANSOBTURATOR TAPE (TOT) PROCEDURE

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OBJECTIVE: To evaluate the sexual surveys of the female patients who have undergone TOT due to stress and mix incontinence according to the body mass index rates.

METHODOLOGY: Calculations were made for women whose clinical and urodynamic stress and mix incontinence was confirmed between 2008-2015 and whose spouses had also undergone physical examination according to WHO's following BMI cut-off points for public health action for the Asian population: <18.5 kg/m² (underweight), 18.5–23.0 kg/m² (normal weight), 23.1–27.4 kg/m² (overweight) and ≥27.5 kg/m² (obese). The Female Sexual Function Index (FSFI) and the International Index of Erectile Dysfunction (IIEF) surveys were conducted before surgery and on the 3rd month.

RESULTS: The total score was high in the normal BMI group and more significantly high than the obese group. The total FSFI score was high in the overweight and obese BMI groups but no significant difference was observed between them. While a significant increase was observed in all groups in the total IIEF score, the increase in the total IIEF score occurred mostly in the obese group. In addition to the increase in sexual satisfaction before TOT in the partners, it was expressed that also the number of intercourse increased after TOT (Table I).

DISCUSSION: A significant increase was observed in terms of sexual satisfaction in all BMI groups and their spouses after TOT surgery.

Keywords: sexual functions, body mass Index, transobturator tape

Evaluation of the sexual status of women and their partners according to the body mass index (kg/m²) rates before and after TOT and in the 3rd moth (n=319).

	Genders(Before op)				Genders(After op/3rd month)			
	18.5-23.0 (n=97)	23.1-27.4 (n=163)	≥27.5 (n=59)	p	18.5-23.0 (n=97)	23.1-27.4 (n=163)	≥27.5 (n=59)	p
Women								
FSFI-SD	4.0 ± 1.3	3.0 ± 1.3*	2.2 ± 1.3*†	0.000	8.2 ± 1.4	9.1 ± 2.1*	7.2 ± 2.4*†	0.000
FSFI-SA	3.1 ± 1.7	4.0 ± 1.4*	3.1 ± 1.3†	0.000	5.3 ± 1.2	7.2 ± 1.3*	9.9 ± 2.4*†	0.000
FSFI-SL	3.9 ± 1.1	3.2 ± 1.5*	3.6 ± 1.3	0.000	6.2 ± 1.4	10.1 ± 1.6*	8.8 ± 2.9*†	0.000
FSFI-SO	3.8 ± 1.8	4.1 ± 1.4	3.4 ± 1.3†	0.011	5.9 ± 1.9	8.3 ± 1.6*	8.6 ± 2.4*	0.000
FSFI-SS	2.4 ± 1.2	4.6 ± 1.2*	3.0 ± 1.3*†	0.000	8.4 ± 1.9	8.6 ± 1.9	8.4 ± 2.5	0.920
FSFI-SP	3.5 ± 1.3	3.5 ± 1.2	4.1 ± 1.3*†	0.010	5.9 ± 1.5	8.9 ± 1.7*	9.9 ± 1.5*†	0.000
Overall FSFI	19.0 ± 1.4	19.0 ± 1.2	17.0 ± 1.1*†	0.000	31.0 ± 1.1	28.2 ± 1.6*	28.6 ± 1.9*	0.000
Partner								
IIEF-EF	21.9 ± 3.1	18.9 ± 1.7*	16.2 ± 1.2*†	0.000	22.6 ± 3.9	23.8 ± 1.4*	24.2 ± 1.2*	0.000
IIEF-OF	8.3 ± 1.6	6.3 ± 1.4*	7.2 ± 1.4*†	0.000	8.9 ± 1.1	9.1 ± 1.4	10.0 ± 1.5*†	0.000
IIEF-SD	7.4 ± 1.4	6.2 ± 1.3*	7.9 ± 1.4*†	0.000	9.1 ± 1.2	10.4 ± 1.5*	9.7 ± 1.6*†	0.000
IIEF-IS	6.9 ± 1.2	8.2 ± 1.3*	7.0 ± 1.9†	0.000	10.7 ± 1.3	9.6 ± 1.6*	10.9 ± 1.8†	0.000
IIEF-OS	5.5 ± 1.5	8.1 ± 1.2*	8.0 ± 1.4*	0.000	13.1 ± 1.2	10.6 ± 1.3*	9.7 ± 1.7*†	0.000
Overall IIEF	49.0 ± 1.1	44.2 ± 1.2*	41.2 ± 1.3*†	0.000	69.0 ± 1.5	68.2 ± 1.4*	71.8 ± 1.1*†	0.000

ANOVA (Tukey test)

* Difference with group (18.5-23.0) p < 0.05 / † Difference with Group (23.1-27.4) p < 0.05

TP - 05

RESULTS OF MICRO TESTICULAR SPERM EXTRACTION (M-TESE) IN PATIENTS WITH MATURATION ARREST (MA)

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OBJECTIVE: The sperm finding success rate was evaluated according to the maturation arrest level in patients with non-obstructive azoospermia who had previously been pathologically diagnosed with maturation arrest.

METHODOLOGY: One-hundred-and-two patients who had retrospectively undergone m-TESE or m-redo TESE in our clinic and who had been previously pathologically diagnosed via m-TESE or testicular biopsy, were screened. The semen analyses were performed, karyotype levels, AzF deletions, FSH and the total testosterone (TT) were checked and the previous pathological findings were obtained. There were pathological findings of early MA (arrest at the primary spermatocyte stage) in 39 patients, late MA (at the early spermatid stage) in 30 patients, diffuse MA (with 100% positive tubules) in 19 patients and focal MA (with a tubule rate of 35%) in 14 patients. M/m-redo-TESE was applied in all patients.

RESULTS: The mean age was 33 ± 10.9 and the duration of their marriages was 11 ± 6.3 years. The semen volumes were 4.9 ± 2.2 ml, FSH was 16.25 ± 9.26 mUI/L and TT was 312.65 ± 10.22 ng/dl. No genetic pathology was observed in the patients. While sperm was detected in 3 patients with MA (7.6%), 9 patients with late MA (30%), and 1 patient with diffuse MA (5.2%) following m-TESE/m-redo TESE, no sperm could be detected in focal MA patients.

DISCUSSION: It was observed that the sperm finding rate was better in late MA patients (at an early spermatid stage) compared to other MA patients. It is believed that late maturation arrest is a good predictor in deciding for m/m-redo TESE.

Keywords: micro,TESE, maturation arrest

TP - 06

A RARE CASE: INFERTILITY DUE TO OBSTRUCTIVE AZOSPERMIA WHICH IS ASSOCIATED WITH MULTIPLE UROGENITAL ANOMALIES SUCH AS RIGHT PELVIC ECTOPIC KIDNEY AND AGENESIS OF IPSILATERAL SEMINAL VESICLE AND IPSILATERAL VAS DEFERENCE BOTH

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OBJECTIVE: One of the cause of male infertility is seminal vesicle agenesis (SVA) and this entity may be unilateral or bilateral. This pathological condition may be associated with urogenital anomalies such as ipsilateral renal agenesis and agenesis of the vas deference also. Male reproductive system and urinary system have close relationship about embryological anatomical development then congenital anomalies may affect the two system both simultaneously.

Herein we present a rare case, infertility due to obstructive azospermia which is also associated with multiple urogenital anomalies such as agenesis of ipsilateral seminal vesicle and vas deference both and accompanying right pelvic ectopic kidney.

MATERIAL-METHODS: A 23-year-old male patient was referred to our center because of infertility. Although right vas deference was not palpable, physical examination revealed normal secondary sex characteristics of male with both testes in normal size and normally located in the scrotum. Sperm analysis of him demonstrated azospermia. Hormone profile revealed total testosterone 496,7 ng/dl (normal, 249-836 ng/dl), FSH 8,4 IU/l (normal, 1,5-12,4 IU/l) and LH 7,7 IU/l (normal, 1,7-8,6 IU/l), respectively. Scrotal ultrasonography (US) demonstrated bilateral epididymal canalicular dilatation and right testis 48x23x29 mm in size, left testis 47x24x20 mm in size also noted. Right SVA and rudimentary left seminal vesicle with echogenic lumen was observed by transrectal US examination. Contrast-enhanced computed tomography (CT) of the abdominopelvic region demonstrated right pelvic ectopic kidney and ipsilateral SVA. Contrast-enhanced CT abdominopelvic; Right pelvic ectopic kidney and agenesis of the right seminal vesicle was found. The patient's wife researched for any infertility etiologies but no pathological problem could find.

RESULTS: After the diagnosis of obstructive azospermia confirmed TESA process performed and tissue samples were taken on the detection of motile sperm for cryopreservation on the demand of family's child request. His wife get pregnant with intrauterine insemination in the same session.

CONCLUSION: Although the seminal vesicle agenesis is a rare pathology it is also important about infertile man with obstructive azospermia.

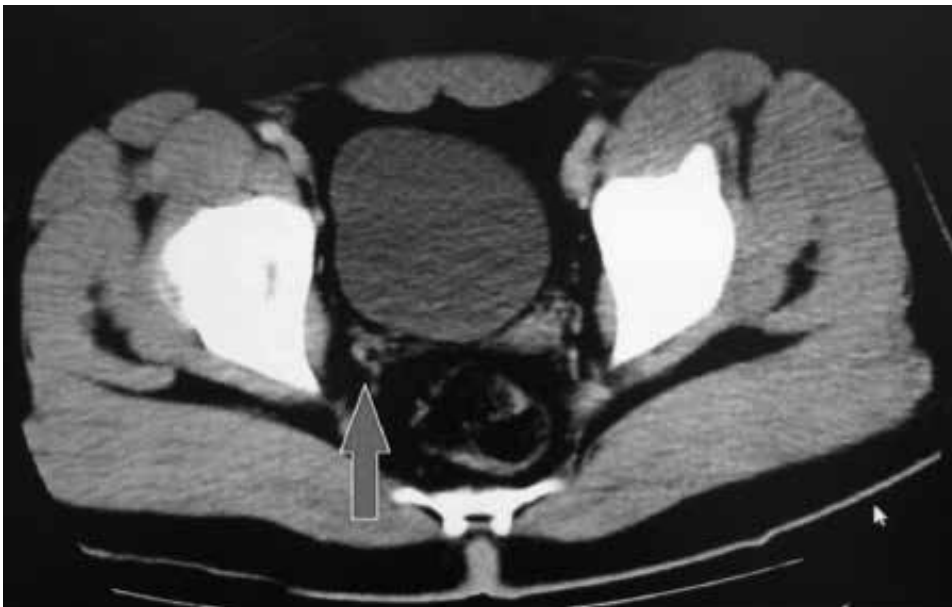
Keywords: Infertility, Pelvic ectopic kidney, Seminal vesicle agenesis, Azoospermia

1



Right pelvic ectopic kidney

2



Right seminal vesicle agenesis

TP - 07

FEMALE IDIOPATHIC SPONTANEOUS UNWELCOME ORGASM; A CASE REPORT

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Idiopathic spontaneous orgasm without sexual arousal is a rare condition. That has been described during antidepressive or antipsychotic treatments with several different drugs. There are controversial findings regarding the relationship between panic disorder and sexual dysfunction. The mechanisms by which anxiety impacts sexual arousal in women are not firmly established. Some studies reported that panic disorder patients have more orgasmic problems compared to patients with other anxiety disorders. In this case, 34-year-old woman admitted with idiopathic spontaneous orgasms and unwanted genital sensations. The patient estimated that she experienced sexual arousal culminating in spontaneous orgasm approximately 10–15 times daily with each episode lasting approximately 30 s to 1 min. She reported several symptoms such as palpitations, sense of shortness of breath, smothering, numbness and fear of dying. The patient did not have a medical history of mania or hypomania. An in-depth interview, physical examination, routine hormonal investigations, electroencephalography (EEG) and computed tomography (CT) of the brain were performed. All results were within the normal range. She was diagnosed with panic disorder. The disease had appeared after beginning of spontaneous orgasms. She treated with paroxetine and dosage was increased gradually to 30 mg per day at the end of the month. Additional treatment for a month with alprazolam 0.5 mg twice daily led to improvement. After considering her symptoms and prior treatment, we stopped alprazolam treatment and continued paroxetine 30 mg per day. Spontaneous orgasm attacks and the sexual symptoms resolved gradually after two months. This case report signals need to provide more information on characteristics of spontaneous orgasms by generalists who practice outside the field of sexual medicine.

Keywords: panic disorder, sexual dysfunction, spontaneous orgasm

TP - 08

EJACULATORY DUCT BLEEDING: RARE CAUSE OF HEMATURIA AND/OR HEMATOSPERMIA

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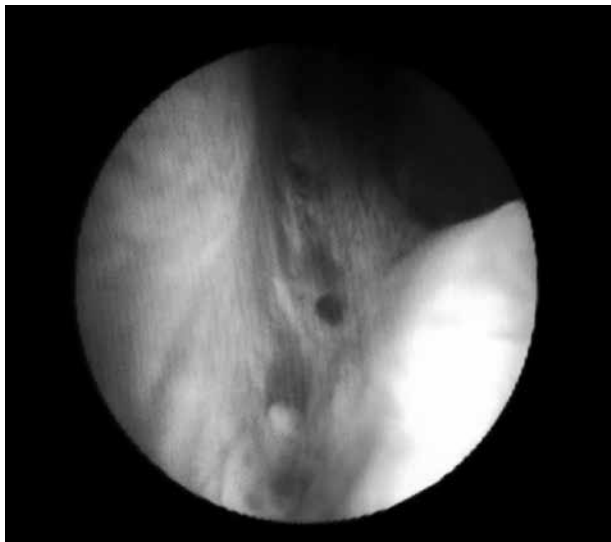
INTRODUCTION: Ejaculatory duct bleeding used to be considered extremely rare. But urologist rarely encounter patients who present with hematuria and hematospermia. In the present case we aimed to investigate the ejaculatory duct bleeding which rare cause of hematuria and/or hematospermia.

CASE: A 70 year old man admitted to the outpatient urology clinic for hematospermia and hematuria. His medical history had no stone disease, bladder cancer or hematuria causes. Diagnostic cystoscopy showed an abnormal bleeding from ejaculatory duct in his posterior urethra. There was no pathology in the bladder. The ejaculatory duct orifices at posterior urethra were coagulated. No complications were occurred during and after the operation. The patient was discharged without any complications in the the postoperative 1st day.

DISCUSSION: Ejaculatory duct bleeding is extremely rare. Urologists should consider the possibility of ejaculatory duct bleeding when presenting a patient with hematospermia and/or hematuria. Cystoscopy must be performed to rule out hematospermia and/or hematuria if someone has these symptoms.

Keywords: haematuria, hematospermia, ejaculatory duct

figure



Ejaculatory Duct Bleeding

TP - 09

A RARE CASE: RIGHT UNDESCENDED TESTICLE AND RIGHT INGUINAL HERNIA WHICH ARE ACCOMPANY WITH IPSILATERAL RENAL AGENESIS AND IPSILATERAL SEMINAL VESICLE AGENESIS AND ALSO CONTRALATERAL TESTICULAR SEMINOMA

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OBJECTIVE: Seminal vesicle agenesis (SVA) is a rare entity, ipsilateral renal agenesis (RA) or vas deferens abnormalities may be associated with this pathology. We herein present a rare case, right undescended testicle and right inguinal hernia which are accompany with ipsilateral RA and ipsilateral SVA and also contralateral testicular seminoma.

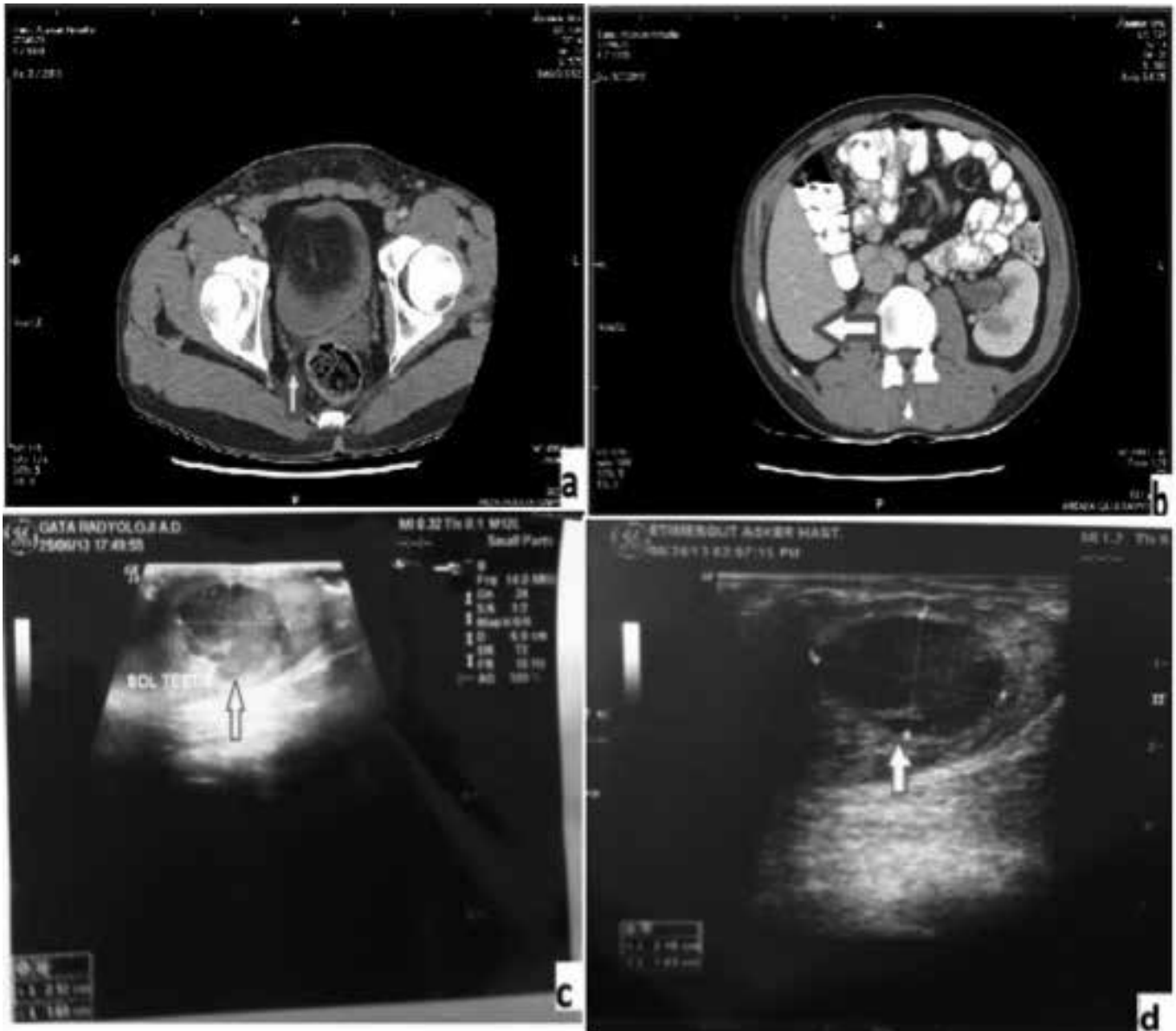
CASE: 24-year-old male patient presented with right inguinal pain and swelling. Physical examination revealed right inguinal hernia which accompany with right undescended testis (UT) and left testicular mass. Scrotal US demonstrated right UT which was detected in the proximal part of the right inguinal canal with 16x29 mm size and ipsilateral inguinal hernia. Multiple left testicular parenchymal calcifications and 22x17 mm hypoechoic lesion which was located in the central part of the left testis were revealed by this examination also. Contrast-enhanced CT of the abdominopelvic region demonstrated right RA and right SVA. Preoperative tumor markers and hormone profile of the patient revealed LDH 679 U/L, B-hcg 0,8 mIU/ml, AFP 5 ng/ml, total testosterone 436,3 ng/dl, FSH 20,9 IU/l and LH 16,7 IU/l

RESULTS: Scrotal exploration performed and intraoperative frozen section taken from left testicular mass. Frozen section examination declared as malignancy in the specimen then left partial orchiectomy performed to him with negative tumor margin. Right inguinal herniorrhaphy and orchiopexy performed him. The final pathological examination result of the left partial orchiectomy specimen reported as classic type of seminoma with intratubular germ cell neoplasia in the margin. Left radical orchiectomy recommended to him but he didn't accept this procedure. First week of the postoperative scrotal US repeated, normal blood supply and hypoechoic heterogen contained calcifications revealed in the left testis. Also 19x22 mm in size right testis with homogeny parenchyma reported by this examination.

CONCLUSION: Male reproductive system and urinary tract sharing close relationship about embryological and anatomic development then some pathological conditions may affect both of them. Due to delays in diagnosis and treatment of the undescended testicles, testicular loss and complication rates as malignancy is increasing. Although the patient with undescended testis has increased risk of the malignancy for the opposite side testis which also at the normal localization. The surgical management of the patient who have undescended testis and contralateral testicular malignancy quite difficult and a great challenge for the urologist.

Keywords: Seminal vesicle agenesis, renal agenesis, undescended testes, inguinal hernia, seminoma

1-a,b,c,d



a:Right seminal vesicle agenesis b:Right renal agenesis, c,d:Left testicular parenchymal calcifications and 22x17 mm hypoechoic lesion

TP- 10

ERECTILE DYSFUNCTION AND PLASMA LEPTIN AND ADIPONECTIN LEVELS

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PURPOSE: we investigated if there is a relationship between erectile dysfunction and leptin, a marker of endothelial dysfunction and adiponectin levels at patients diagnosed with erectile dysfunction.

MATERIALS-METHODS: Between October 2010 and August 2012, 41 patients admitted to the urology clinic with erectile dysfunction and decreased libido, and 36 healthy volunteers who don't have erectile dysfunction, decreased libido or any urological problems admitted to the urology clinic for routine PSA control were included in the study. In both groups, total testosterone, total cholesterol, HDL, LDL, VLDL, triglycerides, fasting blood glucose, plasma leptin and adiponectin levels were determined. The results were evaluated statistically.

RESULTS: In all cases; no statistically significant correlation was found among age, total testosterone, total cholesterol, HDL, LDL, VLDL, triglycerides, fasting blood glucose and leptin, adiponectin.

CONCLUSION: In our study statistically significant difference cannot be found at leptin and adiponectin levels between patients with erectile dysfunction and healthy population. About this matter we need studies with more patients.

Keywords: Erectile Dysfunction, Leptin, Adiponectin, IIEF

TP - 11

IS PREOPERATIVE ERECTILE DYSFUNCTION RELATED RADICAL PROSTATECTOMY PATHOLOGY?

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INTRODUCTION: The aggressiveness of prostate cancer is an important issue affecting treatment strategies and also for predicting survival. We evaluated whether preoperative erectile function is associated with pathologic features in patients who underwent radical prostatectomy.

MATERIALS-METHODS: A total of 103 consecutive patients who underwent radical prostatectomy with severe, moderate erectile dysfunction and without erectile dysfunction were retrospectively evaluated. The data for the International Index of Erectile Function-5 (IIEF-5) and radical prostatectomy specimens were analysed. The patients were divided into two groups as with severe and moderate erectile dysfunction (score 1-11) (group 1, n=48) and without an erectile dysfunction (score 22-25) (group 2, n=55).

RESULTS: There was no difference between mean ages of these groups; 66.1 ± 14.4 vs 67.7 ± 13.7 . Mean Gleason score of group 1 was 7.4 while it was 6.5 in group 2. The tumor volume was significantly higher in group 1; 12.12 ± 15.12 ml vs 6.50 ± 16.24 ml ($p=0.04$). Lastly the pathological stage was $\leq T2c$ 66.1% in group 1 and 74.1% in group 2.

CONCLUSIONS: In the current study aggressive prostate cancer pathology was related with low IIEF-5 scores. Many factors may be a reason for both erectile dysfunction and aggressive prostate cancer. Diabetes Mellitus is a well known etiology for erectile dysfunction. In diabetic patients compensatory hyperinsulinemia may affect apoptosis of the cancer cells, also the changes of tissues may be a reason for transformation to aggressive cancer. Tumor hypoxia, may be another factor which result in aggressive tumor types. Genes of cancer and diabetes could also overlap and lead to both erectile dysfunction and high grade and high volume prostate cancer. Dyslipidemia has been recently related with high-grade prostate cancer which is also known a reason of erectile dysfunction for decades. As a conclusion, decreased erectile function could be a predictor for aggressive prostate cancer.

Keywords: erectile dysfunction, prostate cancer, pathology

TP - 12

THE RELATIONSHIP BETWEEN CAROTID INTIMA MEDIA THICKNESS MEASUREMENT AND ERECTILE DYSFUNCTION

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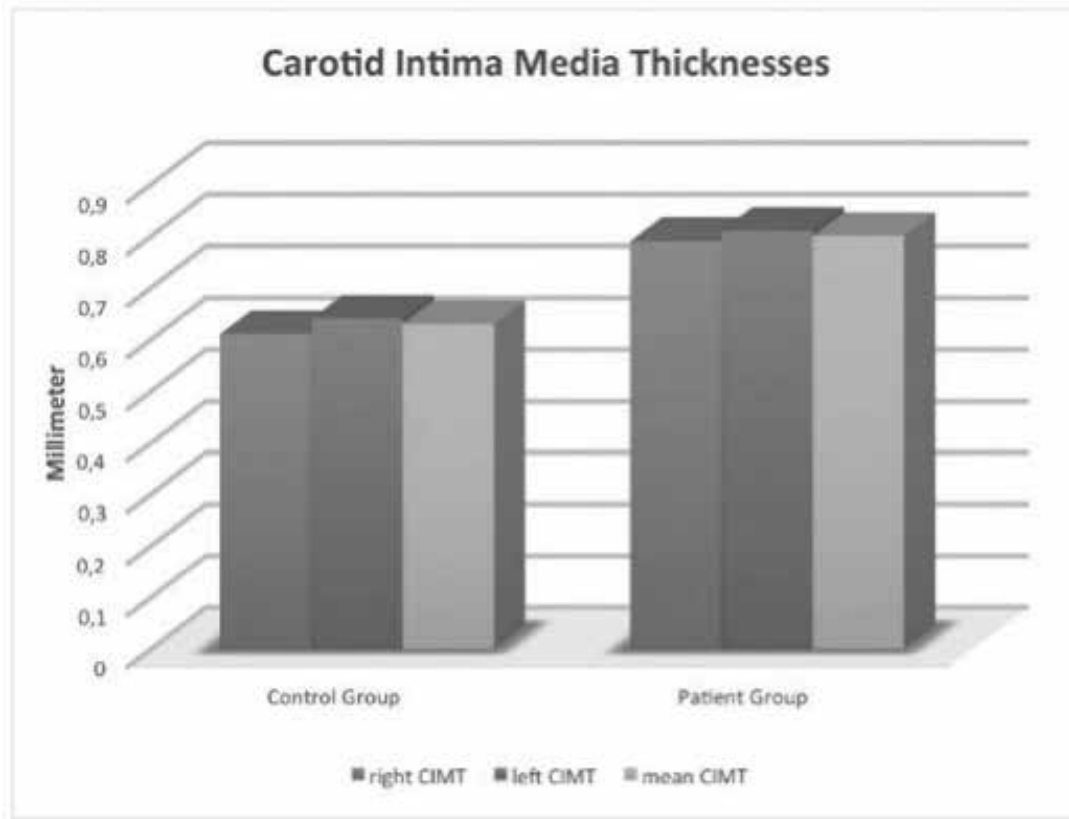
OBJECTIVES: Especially after the age of 40 years old vascular pathologies become more important in erectile dysfunction (ED) and it is known that atherosclerosis plays a major role in development of these vascular pathologies. In this study, men between 40-70 years of age who presented with ED were investigated and we aimed to determine the relationship between erectile dysfunction severity and carotid intima media thickness (CIMT) which was accepted as an early indicator of atherosclerosis.

MATERIALS-METHODS: Between December 2014 and May 2015 one hundred one (n=101) male patients aged 40-70 years, had been included in this study who were applied to our polyclinic because of erectile dysfunction. Sexually active thirty-one (n=31) men with similar properties and in the same age range but without ED were accepted our study as a control group. Carotid intima media thickness measurements were performed for all participants and also hormonal, biochemical and hematological parameters were evaluated for both groups. ED presence and the degree of erectile dysfunction was determined according to International Index of Erectile Function-5 (IIEF-5) scores. Control and patient groups were compared with each other. Statistical analysis was performed to determinate significant differences between control and patient group parameters. The correlation analysis was also performed to assess the relationship between IIEF-5 and other variables.

RESULTS: It was determined that there were a statistically significant increase in carotid intima media thicknesses in patient group (n=101) compared to the control (n=31) group ($p<0,001$). After exclusion of comorbid diseases, patient (n=59) and control (n=22) groups were compared with each other again and carotid intima media thicknesses were statistically significantly higher in the patient group compared to the control group ($p<0,001$) (Figure 1).

CONCLUSION: CIMT measurement can provide important clinical information to physicians in assessing the severity of erectile dysfunction and it can be useful as a supportive tool in diagnosis of ED. Especially due to the current correlation between CIMT and ED; CIMT measurement is considered as a marker that can be used in daily urological practice and it's also new, non-invasive, repeatable and easy to perform.

Keywords: Erectile Dysfunction, carotid intima media thickness



The relation between patient and control groups of CIMT levels.

TP - 13

TRANSSCROTAL ORCHIOPEXY FOR CHILDREN

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OBJECTIVE: Orchiopexy is generally performed using both inguinal, and scrotal incisions in combination. Orchiopexy procedure through a single scrotal incision is a new method accepted as an alternative procedure for standard inguinal orchiopexy. In this study, we aimed to present cases with undescended testis who underwent orchiopexies through a single scrotal incision.

METHOD: A total of 12 patients diagnosed as cryptorchism with physically palpable undescended testes consulted to our clinic between december 2013, and june 2015 were included in the study. Files of the patients were retrospectively evaluated. All cases were reexamined under anesthesia. In cases with testes palpated outside the inguinal ring, scrotal approach was preferred. Operation technique: In unilateral orchiopexy, immediately lateral to the scrotal raphe a single incision, and in bilateral orchiopexy, parallel incisions were made on scrotal creases parallel to the scrotal raphe. Testis was accessed, and gubernacular attachments were dissected away. With blunt, and sharp dissections, inguinal ring was passed over, and spermatic cord was released completely up to the anterior abdominal wall. The presence of hernia sac was controlled. If accompanied with hernia, simultaneous hernia repair was performed. If the length of the liberated cord allowed an easy intrascrotal descend, then operation was continued through a scrotal incision. Afterwards, a left scrotal pouch was created. Testis was placed in the scrotal pouch, and fixated to the dartos fascia.

RESULTS: Median age of the patients was 3.8 (1-9) years. Right (n=5), and left sided (n=4), bilateral (n=3), inguinal (n=9), and higher scrotal (n=3) palpable undescended testes were detected. Median operative time was 34 (16-32) minutes. In none of the cases, a need to switch to a standard inguinal orchiopexy was required. Any postoperative complication was not observed. At postoperative controls performed at 1., and 3. months, testicular atrophy was not detected, and all testes were observed to be in their surgically localized pouches.

CONCLUSION: Orchiopexy procedure through a single incision can be performed in patients with palpable undescended testis in that it is very well tolerated with satisfactory cosmetic results, and decreased operative times.

Keywords: Orchiopexy, scrotal incisions

TP - 14

INTRATESTICULAR VARICOCELE ASSOCIATED WITH EXTRATESTICULAR VARICOCELE: FOUR CASE REPORTS

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INTRODUCTION: Varicoceles are present in 15-20 percent of the normal male population and in approximately 35-40 percent of men presenting with infertility. Rarely extratesticular varicocele (ETV) is associated with intratesticular varicocele (ITV). ITV is an uncommon and relatively new entity, found in less 2% of symptomatic male population. ITV is a benign testicular lesion described as abnormal dilatation of intratesticular veins particularly around mediastinum testis and subcapsular location of testis. Ultrasound (US) with color doppler is the first modality of choice for assessment of ITV. We report four cases of ITV and ETV who presented with history of pain in scrotal region.

MATERIAL-METHODS: The first case (20 years) who has a history of inability to have children for 2 years and scrotal pain. Patient's spermiogram analysis revealed oligospermia (9 million/ml), teratozoospermia (kruger 4%) and motility was normal limits. The other 3 cases (all cases 20 years) who had history of scrotal pain. Spermiogram analysis of 3 patients revealed teratozoospermia (kruger; 4%, 3%,3%), motility and count were normal limits. Routine laboratory blood analysis of four patients were in normal limits. Four patients were examined sonography to evaluate for varicocele existence. On scrotal US of all patients; both testes were normal in size. The caliber of the left pampiniform plexus veins were increased on the left side. Left testis involved abnormal dilated anechoic tubular structures particularly around subcapsular region and mediastinum. Dopler US findings proved their vascular nature with their continuous and low flow velocities. The diameter of the dilated veins ranged around 3 to 4 mm which is increased with valsalva manouevre. Sonographic examination of the right testis and both epididymides was normal in all patients. The features were consistent with ITV associated with ETV on left side.

RESULTS: All patients were performed left subinguinal varicoselectomy operation. Spermiogram analysis of all patients were reverted to normal limits in the controls 3 months.

CONCLUSIONS: ITV is a rare entitiy with a variable sonographic findings and clinical presentations. Most of the cases associated with ipsilateral ETV. Color doppler US is an effective and reliable method to diffrentiate this condition from other possible testicular diseases.

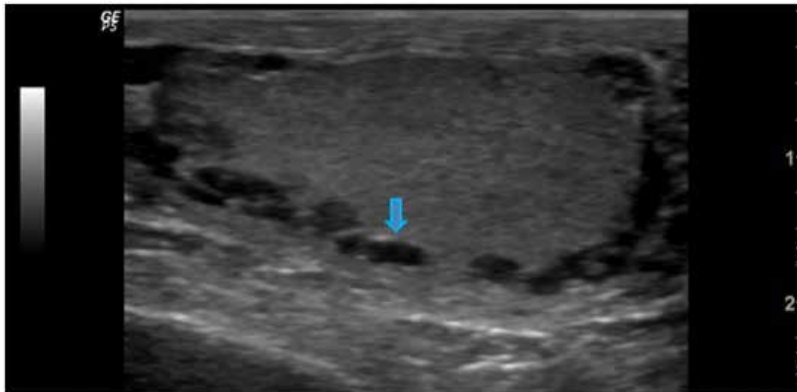
Keywords: color doppler, ultrasound, intratesticular, extratesticular, varicocele

1-a



Longitudinal view of left hemiscrotum shows extratesticular (long arrow) and intratesticular dilated veins (short arrow)

1-b



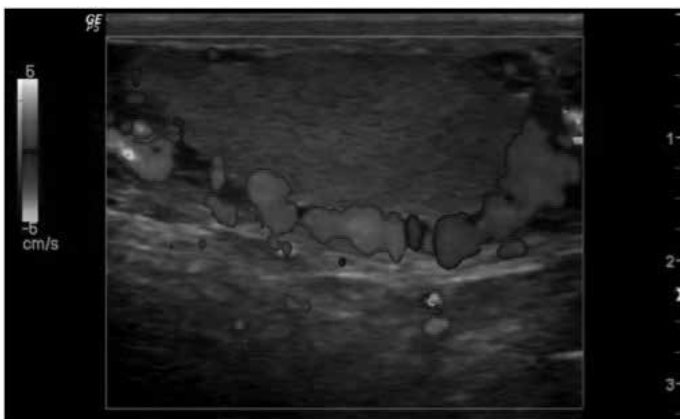
Longitudinal B-mode ultrasonography image show subcapsular and mediastinal, dilated veins within the left testis (arrow)

2-a



Color doppler image of the left testis (with patient at rest) shows dilated veins around subcapsular region of testis

2-b



Color doppler image of left testis during valsalva maneuver shows increased flow within subcapsular dilated intratesticular veins

TP - 15

URETHROPLASTY AND SCROTOPLASTY AFTER GUNSHOT WOUND. CASE REPORT

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Gunshot wounds of male genitalia were not seen frequently and it was required multidisciplinary approach that may include urology, plastic and reconstructive surgery and general surgery. We were present a 27 years old male patients who underwent urethroplasty and scrotoplasty because of gunshot wound.

After gunshot wound of genitalia he underwent wound debridement, bilateral orchiectomy because of testis rupture, rail road urethroplasty and urethral catheter and cystostomy in another state hospital. Post operative 7th day he referred our clinic due to 3 cm urethral defect and extensive genital defect. Necrotic tissues were removed and after healing of infected tissues operation was planned with plastic and reconstructive surgery. distal and proximal board of urethral defect was exposed and full thickness groin flap which arterilized from superficial circumflex iliac artery was prepared with in 6x15 cm diameters and transferred to preneal urethral defect through pubic subcutaneous tunnel. The part of flap in tunnel was de-epithelized. Flap was tubularized and applied to urethral defect. Defect of scrotum was closed primarily. Urethral catheter was removed 20 day after surgery and flow rate was measured 15 ml/s. Second month of surgery globe vesicale developed and urethral catheter could not performed. So that he underwent urethroscopy, a 2 cm stenosis which began proximal board of urethroplasty was seen and internal urethrotomy was performed. Gun shot wounds of male genitalia is bothersome situation for patients and surgeons. The damage was not occurred only due to bullets also occurred because of thermal injury. These patients required multidisciplinary approach and longterm follow up because of late complications.

Keywords: gunshot, scrotoplasty, urethroplasty,

TP - 16

THE EFFECT OF BARIATRIC SLEEVE GASTRECTOMY TECHNIQUE ON WOMEN'S SEXUAL FUNCTION, DEPRESSION AND QUALITY OF LIFE: A PROSPECTIVE STUDY

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PURPOSE: Obesity decreases quality of life and quality of sexual life. Bariatric surgery is the most effective treatment method for obesity and its comorbidities. It is superior over medical treatment modalities. However adequate numbers of investigations have not been performed concerning the effects of bariatric surgery on quality of sexual life. In this study we aimed to investigate the effects of bariatric surgery, specially sleeve gastrectomy, which has been currently performed in increasing numbers, on women's sexual functions and quality of life via widespread all current tests.

MATERIALS-METHODS: A total of 53 patients selected among eligible patients undergoing laparoscopic sleeve gastrectomy in our center between April 2014 and March 2015 were included in our study. Age, body weights and body mass indexes (BMIs) of the patients were recorded preoperatively. The patients completed FSFI (Female Sexual Function Index), Beck Depression Scale and SF-36 (Short form -36) forms before and after the operation and their scores were recorded. Besides, postoperative decrease in body weights and BMIs of the patients were recorded.

RESULTS: Following bariatric surgery, sexual functions of the female patients improved and total FSFI scores increased. When parameters included in the FSFI scoring system were analyzed individually, improvements in sexual desire, sexual arousal, lubrication, orgasm and sexual satisfaction were observed, while parameter of pain did not change.

CONCLUSION: The recent literature reveals that unfavorable effects of increasingly prevalent obesity on sexual functions cannot be denied. We think that the bariatric surgery as in the form of sleeve gastrectomy results in considerable weight loss, besides, women find themselves more attractive, their self-esteem improves and their concerns (anxiety) ameliorate with resultant improvement in their sexual functions and quality of life.

Keywords: obesity; sexual function, bariatric surgery, sleeve gastrectomy, quality of life

TP - 17

THE EFFECT OF BARIATRIC SURGERY ON SEXUAL FUNCTION AND QUALITY OF LIFE OF MEN UNDERGOING SLEEVE GASTRECTOMY TECHNIQUE

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INTRODUCTION AND OBJECTIVES: Endothelial dysfunction and atherosclerosis are important risk factors for erectile dysfunction. Obesity and insulin resistance have been associated with peripheral vascular disease because of its outcomes of endothelial dysfunction and atherosclerosis. However improvement or recovery of sexual functions has been reported in patients who lost weight without resorting to surgical interventions. This improvement in sexual functions has been suggested to be associated with betterment in insulin resistance, hypogonadism and hypertension. In our study we investigated postoperative weight loss and improvement in insulin resistance following bariatric surgery, together with their corresponding effects on alterations in erectile dysfunction.

METHODS: A total of 22 male patients who had undergone sleeve gastrectomy procedures in our center that met inclusion criteria were included in the study. Age, height, bodyweights and body mass index's (BMI) of the patients were recorded preoperatively. Preoperatively and at postoperative 6th month the patients completed international index of erectile function (IIEF-5), quality of life (SF 36, QoL) and Beck depression scale forms and data obtained were recorded together with postoperative weight losses and decreases in their BMIs. Statistical analysis was realized using IBM SPSS Statistics 22 (IBM SPSS, Turkey) program.

RESULTS: In our study, we observed improvements in sexual functions of male patients after bariatric surgery. IIEF-5 scores of our cases increased within the first 6 months after Sleeve gastrectomy technique.

CONCLUSIONS: In obese individuals, erectile dysfunction is seen more frequently because of endothelial dysfunction and lower testosterone levels. Literature reviews have shown improvements in sexual quality of life of more than half of the patients who had undergone bariatric surgery. Contrary to these studies, in some studies authors have not reported any postoperative improvement in IIEF-5 scores in male patients who had undergone "laparoscopic gastric banding surgery " or even they have indicated deterioration in their erectile indices and orgasmic functions. Adverse effects of obesity disease with increasing prevalence on sexual functions cannot be denied. We think that bariatric surgery results in dramatic weight loss, in addition to improvements in sexual function and quality of life.

Keywords: obesity; sexual function; bariatric surgery; Sleeve gastrectomy

TP - 18

A RETROSPECTIVE LOOK AT PATIENTS WITH PREMATURE EJACULATION: CAN IELT STILL BE A RELIABLE CRITERION?

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INTRODUCTION: 120 male patients with premature ejaculation, who did not get any treatment before in Urology Outpatient Clinic in Ankara-Polatlı Duatepe Government Hospital in Turkey between August 2014 and August 2015, were included and their treatment results were retrospectively evaluated.

MATERIAL-METHOD: 120 male patients, aged between 33-89 (mean age: 42.9), who were diagnosed to have premature ejaculation and did not get any related treatment before in our Urology Outpatient Clinic, with an intravaginal ejaculatory latency time (IELT) value below 1 minute, were evaluated retrospectively. IELT measurement were told to all the patients with both choices of treatment, either daily or on-demand usage. 81 patients, who wanted daily treatment and chose citalopram 20mg daily, had a pretreatment IELT between 45-60 seconds and that was learnt to have been measured only as an interval value because of the compliance of the partners. They were between 33-78 and their mean age was 44.1. 13 of them stopped the medication and the remaining 58 of this group had an IELT of 75 seconds after a treatment of 12 weeks. 39 patients, aged between 40-89, who preferred on-demand treatment dapoxetine 30mg. 12 of these left treatment and were excluded during retrospective evaluation. 27 patients, who had dapoxetine during treatment period, had a pretreatment IELT below 60 seconds and all got IELT over 2 minutes at the end of the treatment period.

CONCLUSION: IELT alone cannot be enough to evaluate the efficacy of treatment of premature ejaculation. Whether the patients and their partners have the correct and enough perception of this measure is the factor, affecting directly the success and follow of the treatment. Main factors, affecting the compliance to the medication, are the economic causes and the personal choices of intake, whether daily or on-demand. The results of this retrospective study are also valuable since they reflected IELT being applicable to different parts of population with premature ejaculation. Wider studies are needed to compare the efficacy of SSRIs and dapoxetine for treatment of premature ejaculation.

Keywords: premature ejaculation, dapoxetine, citalopram, intravaginal ejaculatory latency time

TP - 19

COULD P WAVE AND Q-T DISPERSION IN ELECTROCARDIOGRAPHY BE A SIGN OF AUTONOMIC DYSFUNCTION IN PREMATURE EJACULATION

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INTRODUCTION AND OBJECTIVES: Twenty four hour heart rate variability recording has been used to assess autonomic activity but it is expensive and needs long hours. P wave dispersion (PWD) and Q-T dispersion (QTD) has also been using as a marker of autonomic dysfunction. We assessed P wave and Q-T dispersion in premature patients and healthy control group.

METHODS: Thirty-six patients with prematureejaculation (group 1) and 40 patints with normal sexual fuction (group 2)were included study. Patients who had erectyle dysfunction, varicosele, cardiovascular disorder, neurologic disorder, hormonal abnormalities, drug usage which may influence electrocardiography exluded study. ECG performed all patients, PWD and QTD were measured and computed for each patients. The ECGs were recorded at a paper speed of 50 mm/s and at 0.5 mm/mV standardization. During the ECG recordings, all of the subjects breathed freely and did not speak.

RESULTS: The mean age, total testosterone, body mass index, PWD and QTD in group 1vs2 were 32.4±5.7 vs 31.6±5.6, 505.37±92.73 vs 500.37±101.95, 25.71±71 vs 26.17, 50.77±6.60 vs 35.35±3.15, 58.33±5.60 vs 38.33±10.60 respectively. PWD and QTD were statisically significant high in group 1 (p<0.001).

CONCLUSIONS: PWD and QTD may used to show autonomic dysfunction with a simple elecrocadiography in premature ejaculation. In the case that autonomic dysfunction or not may change our treatment strategy

Keywords: p wave, q-t dispersion, premature ejaculation, autonomic dysfunction

TP - 20

PENILE MONDOR'S DISEASE: PRIMUM NON NOCERE!

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Aim Superficial thrombophlebitis of the dorsal vein of the penis (penile Mondor's Disease) is a rare disease with pain and induration of the dorsal of the penis. The possible causes comprise traumatism, neoplasms, excessive sexual activity, or abstinence. We are reporting the case of seven patients with penile Mondor's disease.

PATIENTS AND METHODS: In the first two patients, advanced examination was performed using diagnostic color Doppler ultrasonography with an intracavernosal vasoactive agent (60 mg papaverine hydrochloride) injection after obtaining their informed consent. This diagnostic procedure was not implemented in the next five patients.

RESULTS: The mean age of patients was 34.2 years (range, 22-45). None of the patients had specific anamnesis before the development of painful or painless superficial thrombosis of the penis. All patients had complained of swelling on the dorsum of the penis. There were also three patients who complained of pain. Physical examination revealed cord-like thickening indurations parallel to the coronal sulcus on dorsal and dorsolateral penis. A mean of 3.6 days (2-10 days) elapsed between the onset of symptoms and seeking medical attention at the outpatient clinic. The penile superficial ultrasonography findings were similar for these patients, including an increase in the diameter of superficial dorsal vein, non-compressibility and intraluminal thrombus in the superficial dorsal vein (Figure). The venous current spectrum in this vein was not observed via color Doppler examination. Treatments of the patients included local dressing with heparin ointment and oral treatment with nonsteroidal anti-inflammatory (dexketoprofen trometamol (25 mg), twice daily), and 500 mg Cefuroxime. The patients was advised to abstain from sexual activity until the symptoms resolved and was scheduled for follow-up in a week, a month and two months. After the one month, the pain subsided and induration disappeared in all of the patients. Discussion Penile Mondor's disease can sometimes create anxiety in patients. In the literature, diagnostic penile Doppler ultrasonography with an intracavernosal vasoactive agent injection has been reported. Such examination was carried out in our first two patients; these patients developed priapism. We think that the penile Doppler ultrasonography is not necessary in these patients, because of the risk of the priapism.

CONCLUSION: Penile Mondor's disease is a rarely benign pathology of the superficial dorsal penile vein. Proper diagnosis and treatment can help to relieve the anxiety of the patient. A simple physical examination is sufficient for diagnosis, and palliative treatment is effective. For the diagnosis of this disease, unnecessary tests should be avoided so that patients are not harmed.

Keywords: Penile Mondor's Disease, color doppler ultrasonography, thrombophlebitis



Figure. Colour Doppler ultrasound showing thrombosis of the superficial dorsal vein of the penis (arrows). When there was current flow in the other veins of the penis, this was not monitored in the superficial dorsal vein.

TP - 21

THE RELATIONSHIP BETWEEN MEAN PLATELET VOLUME AND OTHER PLATELET INDICES WITH TESTICULAR ARTERY BLOOD FLOW AND FERTILITY: A PRELIMINARY STUDY

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AIM To examine the relationship between platelets (PLT) and platelets indices such as mean platelet volume (MPV), platelet distribution width (PDW), and plateletcrit (PCT) as noninvasive biomarkers with testicular artery blood flow and fertility.

METHODS: Fifty-seven healthy and fertile men with normal semen values and 52 patients with abnormal semen values were included in the study. The participants' PLT, MPV, PDW and PCT values were analyzed. Four different levels of the testicular artery, peak systolic velocity (PSV), end-diastolic velocity (EDV), and resistive index (RI) were measured using color Doppler ultrasound.

RESULTS: There was no significant difference in terms of platelet and platelet indices (MPV, PDW and PCT) between the fertile and infertile group. There were no between group differences in the RI values of the testicular- and intra-testicular artery. When all fertile and infertile participants were considered together, there was no statistically significant correlation between the parameters of the testicular artery blood flow (PSV, EDV and RI) and platelet and platelet indices (MPV, PDW and PCT) ($P > 0.05$).

CONCLUSIONS: There is not statistically significant correlation between any of the following parameters: platelets and platelet indices such as MPV, PDW and PCT, RI of the testicular artery, and fertility.

Keywords: Platelets, testicles, blood supply, infertility



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