improved in treated men vs men on placebo (-2.8±3.8 vs. -1.8±3.5, P=0.0037). Three serious adverse events (corporeal rupture) were surgically repaired. We currently employ CCH in our practice as a first line therapy for stable PD with dorsal or dorsal-lateral

**Keywords:** Non-surgical treatment; peyronie's disease; PD

doi: 10.3978/j.issn.2223-4683.2014.s020

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**AB21. Association between vascular evaluation and erection hardness score in the patients with ED**

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**Abstract:** Main causes of erectile dysfunction (ED) are attributed to vascular endothelial dysfunction and impaired blood flow due to arteriosclerotic changes. It is well known that vascular endothelial dysfunction has related to life-style related disease, as well as hypertension, diabetes mellitus, dyslipidemia and others. And it is widely accepted that ED is the good predictor of cardiovascular event. There are clinically some methods to evaluate the atherosclerosis in men such as FMD, pulse wave velocity (PWV) and carotid ultrasonography. In our study, we clinically examined the association among the erection hardness score (EHS), PWV, and the presence of carotid arterial plaques. PWV is a measure of arterial stiffness and a marker of vascular damages. Higher PWV means that the vessels are less elasticity. Because PWV is gradually increased by age, we evaluated the correct value which is PWV at the first examination minus reference PWV by age. Our study revealed that patients with lower score of EHS at the first visit had higher PWV and were more likely to have carotid arterial plaques, and therefore, a high possibility of organic ED. Patients with Organic ED were significantly higher than those with psychogenic ED in PWV.

And also our study indicates that the hardness of the penis can be an easier, clearer and more sensitive index of atherosclerosis.

**Keywords:** Erectile dysfunction (ED); erection hardness score (EHS); pulse wave velocity (PWV)

doi: 10.3978/j.issn.2223-4683.2014.s021

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**AB22. Role of varicocele repair for male infertility in the era of assisted reproductive technologies**

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**Introduction:** Although infertile couples may include men with a varicocele, IVF/ICSI as primary treatment for male-factor infertility has greatly increased and can potentially decrease direct medical intervention for infertile men when they seek treatment from a urologist specializing in male infertility. Such series of treatment strategy might increase the risk of unnecessary interventions for the female partner, which could lead to potentially serious complications
of ART, such as multiple pregnancies and ovarian hyperstimulation syndrome. In addition, repeat IVF/ICSI can be a considerable economic burden for infertile couples. However, using the internet, patients now have greater access to information on feasible treatment options for male infertility. This knowledge might motivate infertile couples to visit a male infertility clinic. In such cases, physicians and patients must choose the most appropriate treatment from the variety of treatments available for male-factor infertility.

**Treatment indications and varicocele management:** Clinical varicoceles are classified into three grades: grade 1, palpable only during the Valsalva maneuver; grade 2, palpable distension while the patient is standing; and grade 3, visible distension. The 2013 European Association of Urology (EAU) guideline, as well as 2012 EAU guideline recommends that varicocele repair should be considered in cases of clinical varicocele, oligospermia, duration of infertility greater than 2 years, and otherwise unexplained infertility in a couple, which is classified as evidence level A. The WHO reported that physical examination had a sensitivity of only about 50% in detecting varicoceles. Jarow et al. used ultrasound to examine vein diameters. Men who had spermatic veins with a diameter greater than 3.0 mm had significantly better semen characteristics after varicocele repair than did men with veins less than 3.0 mm in diameter. The most widely accepted criterion is presence of multiple veins with a diameter greater than 3.0-3.5 mm in conjunction with reversal of flow on color Doppler ultrasound. There are a number of unresolved issues in the management and treatment of varicoceles in adolescents. The 2013 EAU guideline recommends varicocele treatment for adolescents with progressive failure of testicular development, as documented by serial clinical examinations.

**Approaches to varicocele repair:** Most recent reviews concluded that microsurgical varicocele repair has clear advantages over the other techniques, namely, better pregnancy outcomes, lower complication rates, and lower recurrence rates, although this technique requires specific training in microsurgery.

Several reports mentioned that laparoscopic surgery under general anesthesia was more invasive than subinguinal microsurgical repair with local anesthesia.

**Effectiveness of varicocele repair in treating male infertility:** A number of studies reported that varicocele repair improves semen parameters such as sperm concentration, sperm motility, and progressive sperm motility. The recent meta-analysis and review from Baazeem et al. summarized the effectiveness of varicocele repair in improving semen parameters. In that analysis, the authors selected 22 prospective studies of men with abnormal semen parameters and clinical varicoceles, and observed sperm concentration before and after surgery. The mean improvement in sperm concentration for the 22 studies was 12.3 million sperm/mL (95% CI, 7.07-14.65; P<0.001). Similarly, after varicocele repair, improvement in sperm total motility in 17 prospective studies and progressive sperm motility in 5 prospective studies was 10.86% (95% CI, 7.07-14.65; P<0.001) and 9.69% (95% CI, 4.86-14.52; P=0.003), respectively, which were statistically significant increases. In summary, current evidence indicates that varicocele repair improves semen parameters; however, evidence regarding spontaneous pregnancy rates is equivocal.

**New role of varicocele repair in the ART era:** Varicocele repair for couples who undergo IVF/ICSI. Esteves et al. studied 242 men with infertility and evaluated clinical outcomes of ICSI in patients with abnormal semen parameters stratified by clinical varicocele treatment status (treated vs untreated). Total number of motile sperm (6.7×10^6 vs. 15.4×10^6, P<0.001) and normal 2PN fertilization rate (78% vs. 66%, P=0.04) were significantly higher in treated men than in untreated men. Notably, as compared with untreated men, the probability of achieving clinical pregnancy in couples with treated men increased by 1.82 fold, and the rate of live births increased by 1.87 fold; the rate of miscarriage rate decreased by 0.43 fold. All differences were statistically significant. There have been several reports and discussions regarding varicocele repair for men with nonobstructive azoospermia. Without testicular sperm extraction (TESE), only 3 of the 31 (9.6%) men after varicocele repair had sufficient motile sperm in ejaculate for ICSI. After varicocele repair, men with clinical varicoceles associated with nonobstructive azoospermia rarely have sufficient sperm in ejaculate to avoid TESE. A recent study by Inci et al. showed that varicocele repair had significant effectiveness for men with clinical varicoceles and nonobstructive azoospermia who had undergone micro-TESE/ICSI. In an analysis of treated and untreated men, the sperm retrieval rate (53% vs. 30%) was significantly higher in the treated group, although the clinical pregnancy rate (31.4% vs. 22.2%) did not significantly differ. These results suggest that varicocele repair may be an option for infertile men who are undergoing ICSI. Cost-effectiveness of varicocele repair with ART: Most of the several cost-effectiveness analyses of couples with infertility undergoing ART found that varicocele repair was more cost-effective than primary treatment with assisted reproduction alone, if
the male has a clinical varicocele. 

**Conclusions:** Despite the necessity for specific training in microsurgery, microsurgical varicocele repair, is the most promising treatment option and is expected to become the gold standard for treating infertility in men with varicoceles.

Evidence on varicocele repair is rapidly accumulating, and future research should evaluate current and new diagnostic methods, management plans, and repair techniques in studies with unified reporting methods and sufficient patient enrollment.

**Keywords:** Male infertility; microsurgery; testicular sperm extraction (TESE)

doi: 10.3978/j.issn.2223-4683.2014.s022

Cite this abstract as: Nagao K. Role of varicocele repair for male infertility in the era of assisted reproductive technologies. *Transl Androl Urol* 2014;3(S1):AB22. doi: 10.3978/j.issn.2223-4683.2014.s022

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**AB23. Male infertility: forgotten issue in men’s health**

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**Abstract:** In general, the man’s response to infertility has been viewed as taking less of an emotionally than his partner’s. While the findings on quality of life (QoL) of infertile women have shown mainly agreement, this seems not to be the case in men. Studies on men’s QoL have resulted in inconclusive findings. It is clear that male infertility is one of important issues in men’s health as it could alter the men’s self-esteem (read: quality of life). Medical recommendations to resolve male infertility problems can be classified into three categories; surgical or medical therapy, donor insemination (DI), and assisted reproductive technologies (ART). Psychological research and consultation have been most implicated with the latter two recommendations. The fact that some infertile couples can realize their goal of forming a biological family when here to fore such as possibility was denied them, serves to strengthen the family unit. *In vitro* fertilization (IVF) offers a chance to produce a child for those men who are sub-fertile, that is, have a low sperm count, poor sperm motility or morphology. Overall, there is much evidence to show that women react more intensely to IVF than men. Research has shown that prior to IVF, women report more anxiety and depression, and after treatment failure depressive symptomatology is less common in men. More surprisingly are recent findings, which show that men and women are similar in terms of how they respond to different stages of an IVF cycle. Authors’ experience with PESA and TESE showed good results in the treatment of male factor infertility, with good participation of the male’s partner.

**Keywords:** Male infertility; quality of life (QoL); testicular sperm extraction (TESE); *In vitro* fertilization (IVF)

doi: 10.3978/j.issn.2223-4683.2014.s023

Cite this abstract as: Soebadi DM. Male infertility: forgotten issue in men’s health. *Transl Androl Urol* 2014;3(S1):AB23. doi: 10.3978/j.issn.2223-4683.2014.s023

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**AB24. Restoration, preservation and fertility prevention of men with oncological diseases**

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**Abstract:** Several types of cancers in men are characterized by peak incidence in reproductive (20-40 years), pubertate (12-19 years) and prepubertate (<12 years) periods of development, thus occurring before a patient can realize his reproductive function. The most common of these malignancies are testicular tumors, lymphomas, and leukemias. Given the appropriate treatment modalities which are currently available, patients suffering from these tumors can achieve good or excellent oncologic prognosis, 5-year overall survival rate exceeding 90%, the majority of patients cured with the treatment. Meanwhile, the malignancies themselves or applied treatment options (surgery, chemo- and radiotherapy) significantly damage