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## VARICOCELE

Varicoceles are dilated veins of the testicles. In fact, they are varicose veins. It is the most common cause of male infertility with 40% of sub-fertile males have this condition. Varicocele is even more common in men who have previously fathered children and are now unable to do so. They are diagnosed by physical examinations and ultrasounds. Varicoceles may cause progressive injury to the production and the maturation process of sperm with worsening sperm count over time. The majority are on the left and some are on both sides.

The mechanism by which varicocele impairs infertility is a matter of ongoing debate. The most likely explanation is the abnormal elevation of scrotal temperature. Normal scrotal temperature is a few degrees lower than the core body temperature as required for normal sperm production and maturation to proceed.

Not all varicoceles are associated with male infertility. 15% of all men have varicoceles and only a small proportion of these men present to us for infertility evaluation. The reason(s) behind this inconsistency is not known; it may be due to individual difference in susceptibility, compensation by female fertility or excellent baseline male fertility such that despite varicocele-induced impairment, fertility has not been sufficiently reduced.

Varicoceles affect seminal parameters in many ways. These include reduction in sperm count, motility, morphology, sperm penetration scores and possibly the production of anti-sperm antibodies. An adequate semen analysis result does not rule out male factor infertility and additional studies may be required.

Treatment is surgical in the vast majority of the cases. All of the surgical procedures are done on an outpatient basis. Different approaches include an inguinal (or groin) or laparoscopic approach. The inguinal approach may be done with the aid of an operating microscope (microsurgical) which is used to provide optical magnification in order to preserve the testicular arteries and lymphatic channels.

Surgical ligations (tie off) of varicoceles result in 70% of patients having improvement in their semen analysis and 40% of the couples achieving pregnancy. Recurrence rates are the lowest in the microscopic approach and are around 1-2%. Recurrence rates for laparoscopic and radiographic approaches are higher. In terms of complications, all types of surgery have the risks of bleeding and infection. Scrotal swelling (hydrocele) is noted in up to 15% of all patients undergoing non-microsurgical open repair. Hydrocele is seen rarely with microsurgical repairs.

I prefer the microsurgical inguinal approach for several reasons: the anatomy is much better defined, the testicular artery and lymphatic channels are spared and the procedure is highly effective. The procedure is performed on an outpatient basis. A variety of anesthesia can be used including general, spinal or local anesthesia (lidocaine) with intravenous sedation. The procedure itself takes about one hour per side. The postoperative care includes oral pain medications and several doses may be all that is required. You may then take Tylenol or Motrin on an as-needed basis. You should engage in only minimal activity for 24 hours and may be off work for up to 2-3 days. No heavy lifting for 5-7 days and you may shower immediately and bathe in 7 days. Most men return to work within 2-3 days provided they have mostly desk jobs.

Most insurance plans cover varicocele repairs, not only for infertility reasons but also for scrotal pain and testicular atrophy (shrinkage). Special considerations will be given for those self paying customers and we will be happy to discuss with you in more detail regarding the procedure and direct cost.