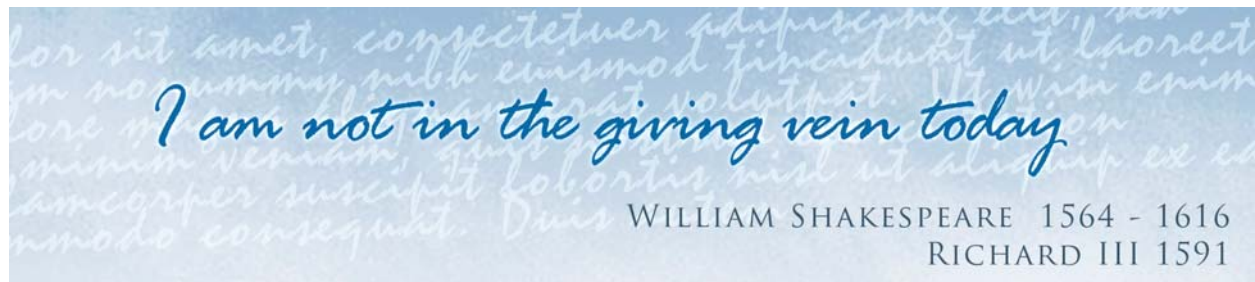




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A varicocele is a collection of varicose veins arising from the scrotum in the pampiniform plexus of veins.

Varicoceles may be associated with infertility.



### Incidence

Approximately 15% of young male adults will have a Varicocele. They develop during puberty. It is found in up to 40% of infertile males.

### Age

The most common age is 15 to 25.

### Sex

It is only found in males

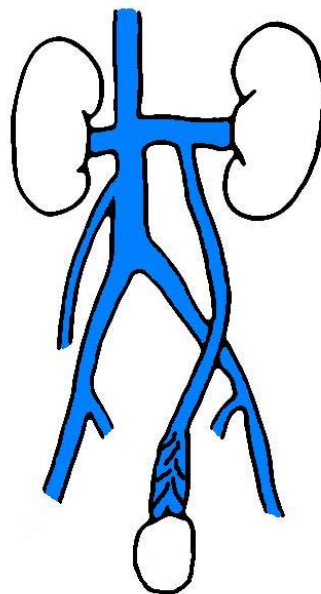
### Historical Note

Celcius first described this condition in the first century AD. He described the veins as “swollen and twisted over the testicle which becomes smaller than its fellow so that its nutrition has become defective”.

Ambroise Pare (1500 - 1590) thought the condition was a result of melancholic blood. The association of varicocele with infertility was first reported in the late 19<sup>th</sup> century



### Anatomy



Anatomy of testicular veins

The blood supplying the testicle drains into the pampiniform plexus of veins. These pass up the spermatic cord and become the testicular vein. On the right the testicular vein drains into the inferior vena cava directly. On the left the testicular vein drains into the left renal vein. Over 90% of varicoceles occur on the left.

### Infertility

Varicoceles have been implicated in male infertility. Varicoceles are more common in infertile men. Testicular temperature is increased due to the abnormal venous drainage. Persistently raised testicular temperature decreases sperm production. The sperm from men with varicoceles show increased abnormal sperms with decreased sperm motility.



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### Presentation

Most varicoceles usually develop slowly and are without symptoms. They present as a soft lump above the testicle which has been likened to a bag of worms. An ache may occur especially as the day progresses. The patient can also experience a feeling of heaviness. They are not tender. The veins are more prominent when the patient is standing.

### Differential Diagnosis

The differential diagnosis includes patent processus and indirect inguinal hernia.

### Investigations

Most varicoceles can be diagnosed by examination alone. Ultrasound scanning is an accurate method of showing varicoceles.

### Treatment

Scrotal supports will ease the discomfort and heavy feeling patients experience. When symptoms persist then operative intervention may be required.

#### *Ligation of varicocele*

This operation is performed through an inguinal incision. The spermatic cord is dissected. The cremasteric muscle covering the spermatic cord is opened. All veins are ligated and divided whilst preserving the other structures in the cord.

#### *Percutaneous Embolisation*

A small tube is inserted into the femoral vein in the groin. It is passed up to the left renal vein and subsequently into the left testicular vein. Tiny metal coils are placed in the vein with embolising substances. This occludes the vein.



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Embolisation – Coils in testicular vein

### Complications

Complications include wound infection and bruising. Infertility may not be reversed. Testicular atrophy is a very rare complication.