

# CYANO ACRYLATE EMBOLIZATION (CAE)

**Glue Therapy for Varicose Vein** 



We'll Treat You Well



Digital Version

# CYANO ACRYLATE EMBOLIZATION (CAE) GLUE THERAPY FOR VARICOSE VEIN

Varicose veins and spider veins are dilated, and tortuous veins seen on the lower limbs. About 40% of males and 50% of females are affected by this disease. Veins carry the impure (deoxygenated) blood to the heart for oxygenation. Veins have to work against gravity to do so. The muscle contractions in the lower legs along with functioning (competent) valves helps proper return of impure blood upwards to the heart. If these valves are weak or damaged, impure blood gets stagnated in the lower limb, causing the veins to stretch or twist because of high pressure. This condition causes varicose vein and spider veins.

# **CAUSES (ETIOLOGY)**

- Obesity
- Pregnancy
- ·High heel
- Heredity
- •Age more than 50
- Prolonged standing

### **SYMPTOMS**

- Heaviness and dull aching pain of legs
- Pain more towards evening and also night cramps
- Swelling I edema over legs
- Dilated and tortuous visible veins
- Skin over the legs becomes dark and thick
- Itching over legs
- · Bleeding from the veins
- Non healing ulcers over legs
- Deep vein thrombosis

### **DIAGNOSIS**

The disease severity is assessed by Duplex venous scan. It also looks for DVT.

### TREATMENT OPTIONS



## **BEFORE**

**AFTER** 

- Open surgery (Stripping of vein): Under spinal anesthesia the diseased vein is stripped off using a special stripper.
   Complications: pain, wound infection, hematoma, scar, saphenous nerve injury.
- Foam sclerotherapy: Diseased vein is blocked using sclerosing agent (STD I Polidocanol) injected into the vein under ultrasound guidance. Complications: phlebitis, pigmentation, high recurrence rate.
- Endovenous thermal ablation (Laser I Radio-frequency): Under spinal/local anesthesia diseased vein is ablated (blocked) using heat energy generated from laser or radio-frequency probe passed through a catheter.

Advantages: no need of hospital stay, can be done under local anesthesia, no wound scar, faster recovery.

Complications: skin burn, hematoma, risk of saphenous nerve injury.

• Endovenous non thermal ablation -Cyanoacrylate glue closure (Venaseal):

Foam sclerotherapy: Diseased vein is blocked using sclerosing agent (STD I Polidocanol) injected into the vein under ultrasound guidance. Complications: phlebitis, pigmentation, high recurrence rate.

• Endovenous thermal ablation (Laser I Radio-frequency): Under spinal/local anesthesia diseased vein is ablated (blocked) using heat energy generated from laser or radio-frequency probe passed through a catheter.

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- Endovenous non thermal ablation -Cyanoacrylate glue closure (Venaseal):
- Use of cyanoacrylate (CAC) glue is not new to medical specialty. It is used widely for closure of wounds, fixation of mesh, etc. Now this glue is used in a modified form for treatment of varicose veins in a very successful manner. Cyanoacrylate glue is injected into the diseased vein using special gun and catheter system (Venaseal) under Ultrasound guidance.

### ADVANTAGES

- Local anesthesia at a single point only
- No hospital stay
- No wound scar
- No skin burn
- No Nerve injury
- Very less pain after the procedure
- No need of rest after the procedure
- Low recurrence rate





PLEASE SCAN FOR THE LOCATION



Mankhool, Kuwait Road, Al Mankhool - Dubai © 04 440 0500 ⊕ asterhospitals.com ④ ⑨ ⊚ asterhospital

### **DEPARTMENTS**

Accident & Emergency · Anesthesiology · Cardiology · Clinical Nutrition

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Internal Medicine · Laboratory Services · Neurosurgery · Ophthalmology

Obstetrics & Gynaecology · Orthopedics · Patient Affairs