The GAE Procedure

- The Interventional Radiologist makes a small needle puncture in to a blood vessel at the top of the leg and guides a microcatheter (similar to thin spaghetti) in to the blood vessels that supply the inflamed part of the knee. The procedure is performed under a 'twilight sleep' and should be relatively painless.
- Microscopic beads are injected in to the areas with abnormal increased flow and the abnormal blood vessels so these are reduced, while normal flow remains to the knee joint. The main arteries to the knee remain open after the procedure.

For More Information





713-242-1139



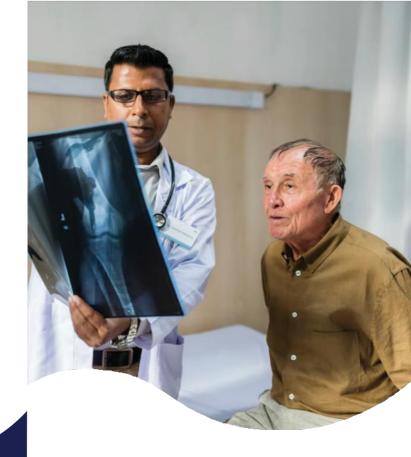
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The Advantages of GAE

- No surgical incision or injection in to the knee joint.
- Performed in an outpatient setting under a 'twilight sleep' without the need for general anesthesia.
- Painless procedure lasting about 1 hour.
- Typically return to work within a day or two without the need fora lengthy recovery.
- Very low complication rate without any affect on future knee replacement (when performed with our technique).
- Symptom improvement usually within 1–3 weeks

Our Team

Dr. Bilal Anwer is a board-certified Interventional Radiologist with advanced expertise in genicular artery embolization—a minimally invasive, outpatient procedure that treats knee arthritis pain without surgery. Using image-guided techniques, Dr. Anwer selectively blocks the abnormal blood vessels responsible for chronic inflammation in the knee joint. This innovative approach provides lasting pain relief, improved function, and quicker recovery—with no incisions, no implants, and minimal downtime.



Knee Arthritis Pain

Treatment in Houston, TX

What is Knee Osteoarthritis (OA)?

Osteoarthritis (OA) is a condition that is caused by repetitive wear and tear of the joints. Damage to the cartilage results in persistent inflammation that causes tiny new blood vessels and nerves to grow within the knee joint.



Healthy knee joint

Osteoarthritis

There are new blood vessels and nerves that grow within the lining of the knee joint (Synovium) that cause knee pain associated with osteoar—thritis. This pain is often felt by patients when they press on their knee in certain locations or bend the knee joint.

What are the Symptoms of Knee OA?



Stiffness (usually related to time of day)

Swelling of the knee joint

Difficulty walking up and down stairs

Difficult walking on flat surfaces

Tenderness in areas around the knee

There are other medical conditions or diseases than can produce similar symptoms, so it is important to undergo a complete medical examination to ensure symptoms are related only to Knee Osteoarthritis.

How is knee OA diagnosed?



Medical history



Detailed physical examination



X-rays and Occasionally MRI or Blood Tests

What are Treatment Options for Knee OA?



WEIGHT LOSS/ PHYSICAL THERAPY

Reduction in weight and Physical Therapy may be associated with improvement in symptoms, however pain may limit one's ability to do so.



MEDICATIONS/ JOINT INJECTIONS

Medications such at Tylenol or Ibuprofen may be effective in reducing symptoms of knee pain and swelling but can also have side effects such as gastritis, liver or kidney damage. Steroid or Lubricant Injections may act temporarily in some patients.



SURGERY

Knee Replacement surgery and other variations of joint replacement are commonly performed in patients whom other measures fail.



GENICULAR ARTERY EMBOLIZATION (GAE)

GAE is a minimally invasive procedure to reduce the inflammation and pain in the knee by reducing the blood supply to the lining of the knee that causes pain and tenderness.

When Is The Right Time To Have GAE?

GAE is useful to relieve knee pain from OA instead of taking frequent medication or getting injections into the knee. It can also be beneficial in those who are not ready to have a knee replacement surgery. Published clinical studies by our team have demonstrated that GAE can provide pain relief without the risks associated with chronic medication or having to get repeat injections, GAE, however, is not necessarily a substitute for total knee replacement and has not been show to negatively impact future knee replacement surgery when performed with our technique.