

Study finds prostate artery embolization to be effective long-term treatment for enlarged prostate

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Prostate artery embolization (PAE) provides long-term effectiveness in treating urinary symptoms from an enlarged prostate gland, according to

new research to be presented at the [Society of Interventional Radiology Annual Scientific Meeting](#) in Phoenix, March 4–9.

In the largest long-term North American study, 1,000 patients who underwent PAE reported significant sustained relief, up to six years, from lower urinary tract symptoms (LUTS) or urinary retention due to benign [prostate](#) hyperplasia (BPH). BPH is the most common benign condition in men, affecting more than 50% of men over age 60. The prostate gland enlarges with age, putting pressure on the urethra, which carries urine from the bladder—typically causing urinary urgency, increased frequency, inconsistency of flow, straining to urinate and inability to completely empty the bladder.

"Our study shows that PAE is a highly effective treatment whose long-term outcomes include sustained LUTS relief and significant improvement in quality of life," said senior author Shivank Bhatia, M.D., Chair of Interventional Radiology at the University of Miami Miller School of Medicine. "Of 18 million men in the U.S. eligible for BPH treatment, many avoid all treatments because of the widely known risks of surgery, particularly sexual side effects and leakage. PAE avoids these risks while achieving long-term positive clinical outcomes."

With PAE, interventional radiologists inject tiny particles into arteries that feed the [prostate gland](#), reducing its blood supply, thereby shrinking it. Researchers say that PAE shows "great short-term to midterm results" and positive long-term results in self-reported symptom improvement.

Participants reported dramatic improvements on the 35-point International Prostate Symptom Score, which ranks symptoms as mild, moderate or severe. Pre-procedure, patients reported a mean score of 23, in the "severe" range. But in less than three months, they achieved a score of 6, with "mild" symptoms persisting throughout the six-year study—a response similar to that following more invasive surgical

options for BPH. However, PAE did not negatively impact sexual function and no incidence of leakage was reported after PAE.

Study participants were also asked a quality-of-life question: "If you were to spend the rest of your life with your urinary condition just the way it is now, how would you feel about that?" Pre-procedure, the mean score was 5 or "mostly dissatisfied," but within a year, the score was 1, or "mostly satisfied," a ranking that also continued throughout.

PAE has a well-established safety profile, as shown in repeated studies in the 10 years since it was first used. However, interventional radiologists say most men are unaware of this treatment option. Most will avoid surgery and may instead take medication for years, even as BPH worsens, potentially leading to bladder failure.

"Patients choose PAE to avoid the side effects of current medications for BPH, which can include [erectile dysfunction](#), painful or difficult urination, constipation, dizziness or fatigue," said the study's lead author Andrew Richardson, M.D., a senior resident at Jackson Memorial Hospital in Miami. "Prostate artery embolization is an alternative not just to surgery but also to lifelong medication."

Among the study's findings was a persistent, years-long reduction in prostate size. However, Bhatia noted that prostate size reduction is not the only goal in long-term effectiveness. "Treatment should make the prostate softer as well as smaller—as opposed to smaller but remaining hard, which will still cause [urinary symptoms](#)."

Bhatia, the primary operator (or treating physician) for all the patients in the study, encourages patients to learn about all options for enlarged prostate symptoms, talk to various physicians and then decide what's best for them. Bhatia says, "One size does not fit all when it comes to treating BPH, and PAE remains a very attractive alternative for patients with

larger glands and in setting of acute [urinary retention](#)."

More information: Abstract #3: Prostate Artery Embolization—Single Center Experience of 1000 Patients with Short, Mid, and Long Term Follow Up.

Provided by The Reis Group

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