

Prostatic artery embolization set to “dramatically increase” in Brazil

In March 2016, the Brazilian Federal Council of Medicina (Conselho Federal de Medicina CFM), the authority in charge of professional regulation and medical licensing in the area of medicine in the country, stated that prostatic artery embolization can be used as a new, alternative treatment for symptomatic patients with benign prostatic hyperplasia. *Interventional News* speaks to Francisco Cesar Carnevale, associate professor of Medicine, University of São Paulo, Brazil, and director, Interventional Radiology Fellowship Programme, about this development.

Commenting on the process that led to the CFM decision, which makes Brazil the first country in which this has happened, Carnevale said: “The first patients treated with prostate artery embolization with the aim of treating symptoms related to benign prostate hyperplasia were carried out at the Hospital das Clínicas of the University of São Paulo (USP) in June 2008. Two patients with urinary retention treated by indwelling catheter and severe comorbidities were treated with embolization, as an alternative treatment to transurethral resection of the prostate (TURP). Both patients had the Foley catheter withdrawn a week after the embolization procedure and lower urinary tract symptoms (LUTS) improved significantly. Subsequently, in 2013, after performing several clinical studies approved by the Ethical Committee at USP, we submitted a dossier to the CFM asking for recognition of embolization as a new procedure that can be used in clinical practice. In March 2016, after several discussions with members of the Brazilian Society of Interventional Radiology (SoBRICE) and the Brazilian Society of Urology (SBU), the CFM stated that prostatic artery embolization can be used as an alternative treatment for symptomatic patients due to benign prostatic hyperplasia.”

“Now, several centres (which have urologists and interventional radiologists working as a team) will be developed throughout Brazil with the aim of collecting data for a final approval and codification by health institutions,” he added.

This approval will influence the number of prostatic artery embolization procedures being performed in Brazil. “These will probably increase dramatically. There is a huge interest in prostate artery embolization from the interventional radiology community. The urology team coordinating this type of embolization at USP has really understood that it works. More than treating patients, the medical team at USP is keen to understand the results of long-term clinical follow-up. Around 250 patients have been treated at our institutions within the setting of a randomised, controlled trial,” Carnevale noted.

Commenting on what the latest evidence is showing regarding prostatic artery embolization, Carnevale said: “Around 2,000 procedures have been performed around the world. It has been shown that the procedure is safe and effective in treating patients with lower urinary tract symptoms related to enlarged prostates. The initial clinical success is reported at around 90%, and severe complications



Francisco Cesar Carnevale

are rare. This is encouraging. Interventional radiologists should not treat any patient without discussing all the treatment alternatives within a team co-ordinated by urologists, and they should respect the patient’s preference. Many urologists have also begun mooted the idea of working together as a group. It is a good start and the same perspective has been reported by other interventional radiologists in different countries.”

Prostatic artery embolization eases nocturia

The interventional radiology procedure for men with enlarged prostates decreases the number of times they wake to urinate in the night, according to research presented at the Society of Interventional Radiology’s 2016 Annual Scientific Meeting (2–7 April, Vancouver, Canada.)

Researchers said the majority of men with enlarged prostates and lower urinary tract symptoms reported better sleep that resulted in an improved quality of life after they underwent treatment with the procedure.

“Waking in the night with an urgent need to urinate, or nocturia, significantly disrupts the lives of men by preventing them from having a full night’s sleep,” said Sandeep Bagla, the study’s lead researcher and an interventional radiologist at the Vascular Institute of Virginia, USA.

“For many men, the cause of their discomfort is an enlarged prostate and these results show men can live a more normal life once they have undergone prostatic artery embolization to address this condition. For these individuals, the procedure has the added benefit of being less invasive compared to other treatments and is performed on an outpatient basis, allowing many men to go home the same day.”

Bagla and his team conducted a retrospective analysis of 68 men

who had an enlarged prostate (benign prostatic hyperplasia) and lower urinary tract symptoms and underwent embolization at two centres: the Vascular Institute of Virginia and the University of North Carolina at Chapel Hill.

The team examined patient-reported quality of life scores, ranging from 0 (delighted with their current status) to six (current condition is unbearable). Patients also used a seven-question symptom index from the American Urological Association (AUA) to report the negative effects of urinary symptoms, with scores ranging from 0 (not bothered by urinary symptoms) to 35 (very bothered by urinary symptoms). This analysis examined both scores before and after treatment, at one month and at three months. Before treatment, patients reported having an average AUA score of 23.9 and average quality of life score of 4.8. They also indicated a nocturnal frequency of urination at 3.3 episodes.

Follow-up with 46 of the original 68 patients was conducted one month after



Sandeep Bagla

treatment. Improvements in nocturnal urination frequency, with an average absolute reduction of 0.85 episodes per night were reported by 25 of these 46 patients (54.4%). All 46 patients also reported an average 10-point reduction in AUA scores and an average quality of life score improvement of 2.1, indicating that their urinary symptoms bothered them less and their quality of life showed improvement. At the three-month mark, 28 of the 38 patients (73.7%) who followed up reported an average reduction of 1.4 episodes a night. They also indicated a 13.4-point reduction in AUA

scores and a 2.8-point improvement in their quality-of-life scores.

“Many of my patients who have undergone the procedure have told me that reducing the need to go to the bathroom at night has improved their daily lives by reducing sleep deprivation, which takes a toll,” added Bagla.

“They are able to enjoy their daytime activities—including quality time spent with their family and friends and hobbies. They have even noticed increased work productivity. Anecdotally, patients who show signs of a better quality of life three months after the treatment appear to continue their progress two or three years after undergoing prostate artery embolization.”

While this research demonstrated that prostatic artery embolization resulted in the reduction of nocturia for men with lower urinary tract symptoms and benign prostatic hyperplasia, Bagla noted that the treatment may not completely eliminate nocturia.

Experts have called for further high-quality clinical research to expand the numbers of patients studied and to extend the duration of follow-up is vital to developing a definitive comparison of the procedure with existing surgical therapies.