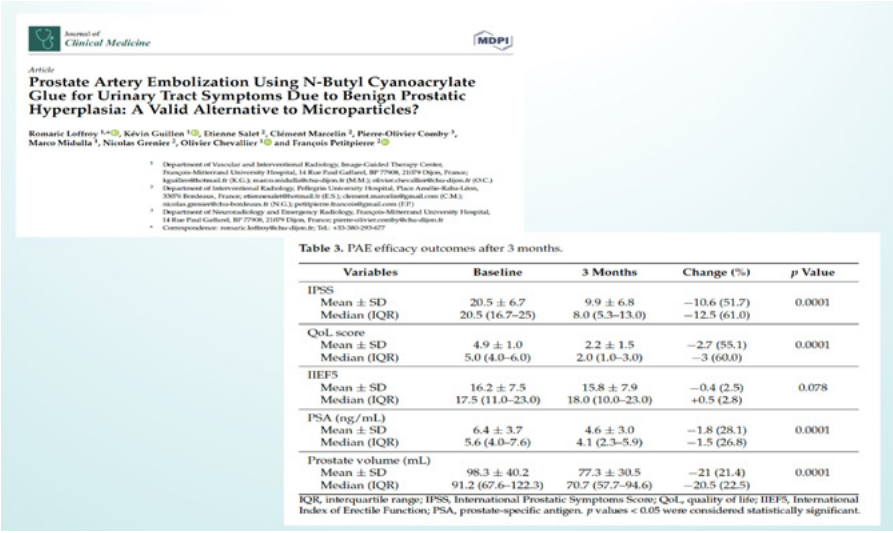
Prostatic embolization

A very interesting indication we recently published about is **prostatic artery glue embolization for adenoma** (Figs. 46-49) [15-16].
We tried to create a blocked flow environment and that is why we preferred a 2.7 F microcatheter. We positioned the tip as far as possible and then injected a 1:8 ratio mixture. Observe the cast travelling distally and the even distribution. This is a 50 patients safety study and, from a clinical perspective, the results are comparable to those indicated by the literature on the use of microparticles.
I personally recently reviewed a paper about a retrospective study on particle embolization versus glue embolization. While the complication rate derived by the use of glue was not considerably lower, what was significant was the difference in radiation exposure. This is due to the simple fact that glue embolization is a much faster procedure. Naturally, catheterism is the most challenging part of this kind of procedure, disregarding the agent of choice, but embolization with microparticles takes about 15 minutes for each side, whereas glue only takes a few seconds to work, and that significantly reduces radiation exposure. Moreover, when we have collaterals, we do not want to embolize, we can occlude them with a cast of glue and push again in the gland, which is not possible with particles. In some cases, if we cannot occlude the proximal port of the collaterals with coils, we cannot perform the embolization. **Glue will work in any situation, especially in a blocked flow scenario**, because when you push some glue very slowly at the proximal port of the collateral and then wait a short time, you will be able to push again in the main branch into the gland with no risk of penile non-target embolization.



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Article

Prostate Artery Embolization Using N-Butyl Cyanoacrylate Glue for Urinary Tract Symptoms Due to Benign Prostatic Hyperplasia: A Valid Alternative to Microparticles?

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Table 3. PAE efficacy outcomes after 3 months.

Variables	Baseline	3 Months	Change (%)	*p* Value
IPSS				
Mean ± SD	20.5 ± 6.7	9.9 ± 6.8	−10.6 (51.7)	0.0001
Median (IQR)	20.5 (16.7–25)	8.0 (5.3–13.0)	−12.5 (61.0)	
QoL score				
Mean ± SD	4.9 ± 1.0	2.2 ± 1.5	−2.7 (55.1)	0.0001
Median (IQR)	5.0 (4.0–6.0)	2.0 (1.0–3.0)	−3 (60.0)	
IIEF5				
Mean ± SD	16.2 ± 7.5	15.8 ± 7.9	−0.4 (2.5)	0.078
Median (IQR)	17.5 (11.0–23.0)	18.0 (10.0–23.0)	+0.5 (2.8)	
PSA (ng/mL)				
Mean ± SD	6.4 ± 3.7	4.6 ± 3.0	−1.8 (28.1)	0.0001
Median (IQR)	5.6 (4.0–7.6)	4.1 (2.3–5.9)	−1.5 (26.8)	
Prostate volume (mL)				
Mean ± SD	98.3 ± 40.2	77.3 ± 30.5	−21 (21.4)	0.0001
Median (IQR)	91.2 (67.6–122.3)	70.7 (57.7–94.6)	−20.5 (22.5)	

IQR, interquartile range; IPSS, International Prostatic Symptoms Score; QoL, quality of life; IIEF5, International Index of Erectile Function; PSA, prostate-specific antigen. *p* values < 0.05 were considered statistically significant.

Figure 46

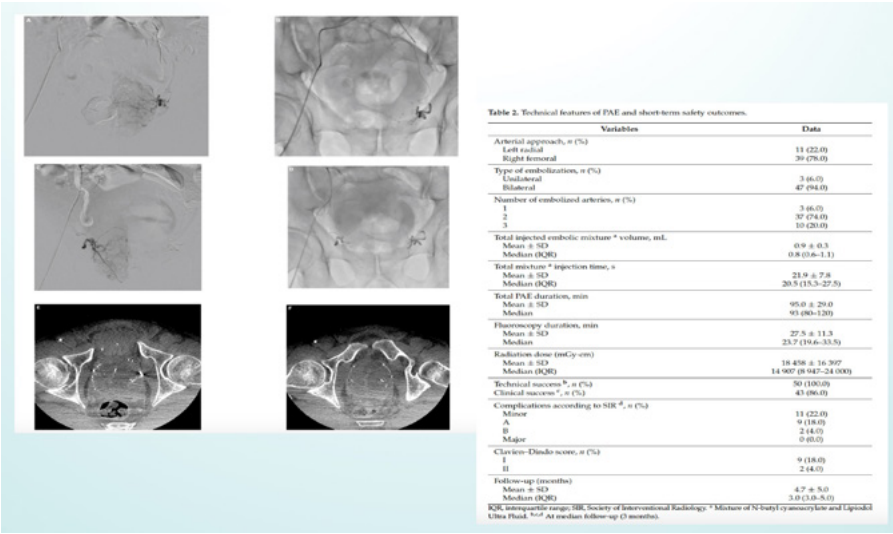

Table 2. Technical features of PAE and short-term safety outcomes.

Variables	Data
Arterial approach, *n* (%)	
Left radial	11 (22.0)
Right femoral	39 (78.0)
Type of embolization, *n* (%)	
Unilateral	3 (6.0)
Bilateral	47 (94.0)
Number of embolized arteries, *n* (%)	
1	3 (6.0)
2	37 (74.0)
3	10 (20.0)
Total injected embolic mixture [a] volume, mL	
Mean ± SD	0.9 ± 0.3
Median (IQR)	0.8 (0.6–1.1)
Total mixture [a] injection time, s	
Mean ± SD	21.9 ± 7.8
Median (IQR)	20.5 (15.5–27.5)
Total PAE duration, min	
Mean ± SD	95.0 ± 29.0
Median	93 (80–120)
Fluoroscopy duration, min	
Mean ± SD	27.5 ± 11.3
Median	23.7 (19.6–33.5)
Radiation dose (mGy·cm)	
Mean ± SD	18 458 ± 16 397
Median (IQR)	14 907 (8 947–24 000)
Technical success [b], *n* (%)	50 (100.0)
Clinical success [c], *n* (%)	43 (86.0)
Complications according to SIR [d], *n* (%)	
Minor	11 (22.0)
A	9 (18.0)
B	2 (4.0)
Major	0 (0.0)
Clavien–Dindo score, *n* (%)	
I	9 (18.0)
II	2 (4.0)
Follow-up (months)	
Mean ± SD	4.7 ± 5.0
Median (IQR)	3.0 (3.0–5.0)

IQR, interquartile range; SIR, Society of Interventional Radiology. [a] Mixture of N-butyl cyanoacrylate and Lipiodol Ultra Fluid. [b,c,d] At median follow-up (3 months).

Figure 47

Figure 48

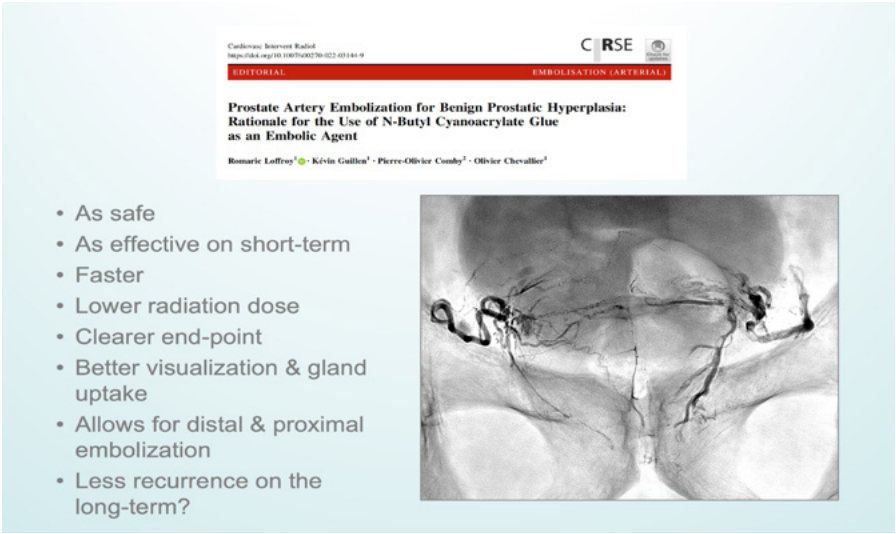

Figure 49