

Pain improvement after percutaneous male varicocele embolization using NBCA-MS: 3-year experience

E. LANZA, N. Gennaro, D. Volpe, R. Muglia, I. Bolengo, F. D'Antuono, D. Poretti, V. Pedicini, L.Pasini

Purpose

To evaluate the efficacy of percutaneous male varicocele embolization using n-butyl-cyanoacrylate-methacryloxy sulfolane (NBCA-MS).

Methods

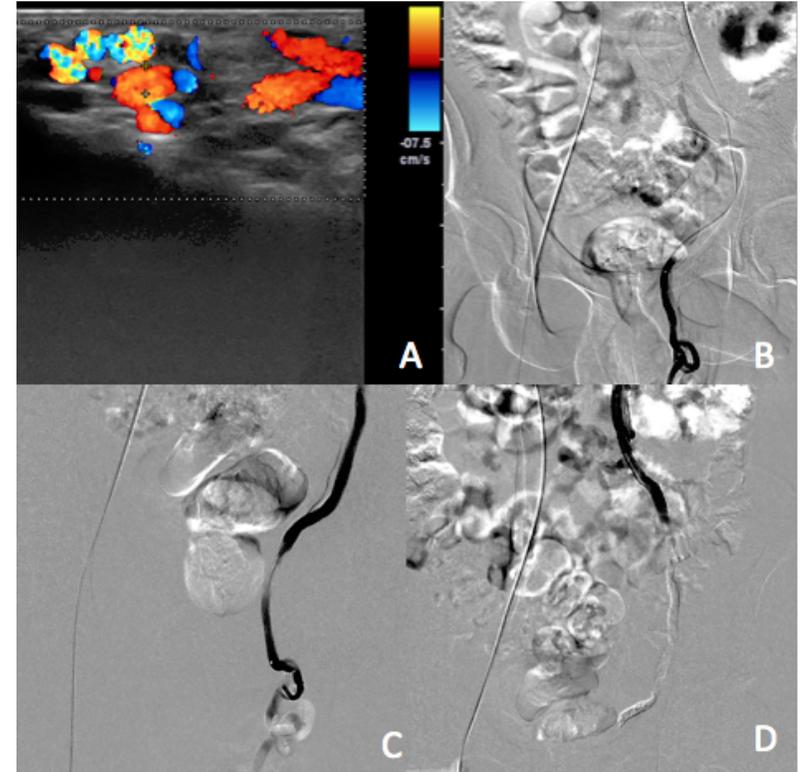
From 1st January 2016 to 31st December 2018, 47 male patients (mean =28 years, age range =15–47 years;) with I-IV grade varicocele underwent 47 embolizations of the internal spermatic vein using NBCA-MS (Glubran 2; Gem, Viareggio, Italy) mixed with ethiodized oil (Lipiodol, Guerbet, France) in a 1:1 ratio. We noted the side of varicocele, the technical success, the procedural time, the grade of preoperative symptoms using a 4-point scale (grade 0=no pain; 4 unbearable pain), any variations in spermiogram parameters, recurrence rate, and complications. The grade of pre- and postoperative pain along with overall satisfaction was performed with clinical visit a 1 month. Two-sample Wilcoxon rank-sum test was used to evaluate the changes in pain scores after the procedure.

Results

We performed 43/47 left-sided, 3/47 bilateral, and 1/47 right-sided male varicocele embolizations. Procedures were technically successful in all cases. Mean procedural time was 42 minutes (range= 20-90, SD=16). No major complications were observed. The median follow-up was 18 months (range=1-78, SD=17). 40/47 patients completed the follow-up questionnaire regarding pre- and post-procedural pain, revealing a significant decrease in pain score from an initial mean value of 1.5 (range= 0-4, SD=1.4) to 0.4 (range= 0-2, SD=0.5), $p = 0.0001$. 2/40 (5%) patients recurred, being only one of them symptomatic (grade 1). 75% of patients reported high satisfaction with the procedure.

Conclusions

Percutaneous embolization of male varicocele using NBCA-MS is an effective treatment to sustainably reduce groin pain.



A) US-Doppler confirming non-patent vein of the pampiniform plexus; B) Selective angiography of a dilated left internal spermatic vein (arrow), C) Start of the embolization of the distal left internal spermatic vein (arrow), D) Further embolization towards the proximal part of the left internal spermatic vein (arrow)