

Venous bleeding complication after cryoablation: preliminary data

 **Marina Stanković***,
 **Renata Valenčak**,
 **Saša Presežnik**,
 **Mato Čizmić**,
 **Alenka Tulčić-Mihelčić**

General Hospital "Dr. Josip Benčević", Slavonski Brod, Croatia

KEYWORDS: atrial fibrillation, cryoablation, femoral vein, hemostasis.

CITATION: *Cardiol Croat.* 2024;19(3-4):129. | <https://doi.org/10.15836/ccar2024.129>

***ADDRESS FOR CORRESPONDENCE:** Marina Stanković, Opća bolnica "Dr. Josip Benčević", Andrije Štampara 4, HR-35000 Slavonski Brod, Croatia. / Phone: +385-35-201-201 / E-mail: stankovic1marina@gmail.com

ORCID: Marina Stanković, <https://orcid.org/0000-0002-8717-0357> • Mato Čizmić, <https://orcid.org/0009-0002-3820-9021>
Renata Valenčak, <https://orcid.org/0000-0001-6323-462X> • Saša Presežnik, <https://orcid.org/0009-0006-8893-6365>
Alenka Tulčić-Mihelčić, <https://orcid.org/0000-0002-4745-1066>

Introduction: Cryoablation is one of the methods used to treat paroxysmal atrial fibrillation, with a complication rate ranging from 0% to 29%, and bleeding being the most common¹. At the General Hospital Slavonski Brod, from 2019 to the present, 118 procedures have been performed. The aim of this research is to determine the frequency of bleeding complications at the puncture site in patients after cryoablation who had an elastic bandage and those who had only gauze pads.

Patients and Methods: The study included patients who underwent cryoablation from March 2023 to October 2023. Continuous variables (age, height, weight, blood pressure, heparin dosage, and time) are presented as means, and the significance of differences between groups was assessed using the t-student test and expressed as p values. Statistical analysis was conducted using IBM SPSS Statistics (version 26.0).

Results: The analysis found a statistically significant difference ($p < 0.05$) between patients in whom an elastic bandage was used and those with just gauze pads (**Table 1**).

Conclusion: During cryoablation, 11 French and FlexCath Advance 12 French sheaths are used for insertion, with the insertion sites being the left and right femoral veins. Patients receive a prescribed dose of heparin during the procedure. The puncture site is manually compressed and sutured, with one group of patients receiving gauze pads and an elastic bandage, while the other group has gauze pads without a bandage. Thus far, there have not been significant differences between the two groups. In one patient without a bandage, bleeding was observed, which could be attributed to the patient's non-compliance with post-procedure resting instructions.

TABLE 1. Patient characteristics.

	Bandage (N=6)	Without bandage (N=7)	p*
Age	66	65	0.85
Women	3	2	
Height (cm)	176	172	0.78
Weight (kg)	81	84	0.12
Systolic blood pressure (mmHg)	132	144	0.03
Diastolic blood pressure (mmHg)	73	86	0.51
Heparin (IU)	13200	13429	0.14
Time (min)	89.00	96.67	0.8
Diabetes	2	0	
Bleeding (N)	0	1	

*Student's t test

LITERATURE

1. Arai H, Mizukami A, Hanyu Y, Kawakami T, Shimizu Y, Hiroki J, et al. Risk factors for venous bleeding complication at the femoral puncture site after catheter ablation of atrial fibrillation. *J Arrhythm.* 2020 Jun 1;36(4):678-684. <https://doi.org/10.1002/joa3.12378>

RECEIVED:
October 21, 2023

ACCEPTED:
October 27, 2023

