Early discharge after atrial fibrillation ablation

Alta temprana tras la ablación de fibrilación auricular

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Atrial fibrillation (AF) ablation has been shown to generally be an effective procedure with low risk of complications¹. However, maintaining the patient hospitalized at least 24 h after the procedure is common practice, to early detect possible complications. Consequently, mean lengths of stay up to 4 days after this procedure have been reported, without this practice apparently improving patient evolution². Given the increasing number of AF ablation procedures¹, excessive costs of prolonged stay, as well as the care demand pressure that exists at our setting, it is important to know if early hospital discharge (< 24 h) of these patients is possible after AF ablation.

The purpose of this study was to assess the safety of early hospital discharge (< 24 h) after AF ablation. To this end, all consecutively included patients were analyzed in an AF ablation program at a hospital center. All patients granted written informed consent before executing the intervention. Patient enrollment was carried out between May 2013 and May 2018, at a hospital with an intermediate volume of annual procedures. In all patients, the ablation procedure was practiced through three to four vascular accesses using the right femoral vein and without stopping anticoagulant medication, if they were taking it previously (Vitamin K antagonists or direct oral anticoagulants). At the beginning

of the procedure, a 100 U/kg bolus of heparin was administered, followed by infusion. Activated coagulation time was not monitored during the procedure and no intracardiac ultrasound was used except in one patient undergoing AF cryoablation and in another with multielectrode circular catheter; in the rest of the patients, ablation was carried out by circumferential isolation of the four pulmonary veins with point-to-point application of radiofrequency and 30-40 W and 45°C parameters. At the end of the procedure, the vascular introducer sheaths were removed without systematically using protamine for coagulation reversal. Hospital discharge was scheduled < 24 h after admission by nursing staff without prior medical visit unless incidents occurred. All patients received hospital discharge under anticoagulation treatment.

One hundred and three patients were included (mean age, 60.8 ± 9.9 years, with 80.6% of males). Paroxysmal AF was identified in 71.8% and the rest had persistent AF. In all patients, isolating all pulmonary veins was possible. Mean time of the procedure was 168.3 ± 43.1 min. There were no acute complications, with the exception of a cardiac tamponade resolved by pericardiocentesis, which prolonged hospital stay to 36 h. Using protamine was necessary only in this patient (100 mg) as well as in other five individuals for local hemostasis (25 mg in

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1 and 50 mg in 4). After examination of the vascular puncture site by nursing staff, 102 (99.0%) patients were discharged in < 18 h after the start of the procedure (mean hospital length of stay, 15.3 ± 1.3 h). A transthoracic echocardiogram was performed in 12 patients before hospital discharge (11 scheduled and one for chest discomfort) without significant alterations being identified. Echocardiogram was performed, particularly in fragile individuals, to ensure that there were no complications. It was not systematically carried out. During follow-up, there was only one complication (1.0%), an arterial pseudoaneurysm on day 3 after discharge, which required surgical repair.

International scientific societies current recommendations do not tell when should hospital discharge after AF ablation be indicated¹. In addition, currently available information is quite scarce, limited to a few publications³⁻⁵. In a recent publication on patients undergoing cryoablation for AF in a London center, with a rate of total complications of 5-6%, only 1.4% of patients were not discharged within the first 24 h after the procedure³. The difference in the number of complications with the authors' study may be due, among other reasons, to the different techniques used (radiofrequency in this case versus cryoablation, with a higher risk of phrenic nerve injury). In a recent communication of a scientific congress, which included 124 patients from one center in California, mean hospital length of stay was 17.5 h⁴. In another scientific communication in a congress of a hospital in Vancouver, AF ablation early discharge was accompanied by higher patient satisfaction in comparison with longer stays, as long as patients had enough information about the procedure, on possible complications and on what to do in case of the occurrence of any complications⁵. In Spain, there are no published data on the effect of early discharge on safety and risk for complications in patients undergoing AF ablation. This series indicates that, in Spain, hospital discharge within the first 24 h, and even within the first 18 h after the procedure, is safe and feasible, with similar results to those recently described in other countries.

Conclusion

Early hospital discharge in < 24 h after AF ablation is feasible and apparently safe, which might have important implications in health organization and on the costs related to the procedure.

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Conflicts of interest

The authors have no conflicts of interest with regard to this publication.

Ethical disclosures

Protection of people and animals. The authors declare that the procedures that were followed complied with the ethical standards of the responsible human experimentation committee and were in accordance with the World Medical Association and the Declaration of Helsinki.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors declare that no patient data appear in this article.

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