Management of Supraventricular Tachycardia During Pregnancy: A Case Report

Tratamento de Taquicardia Supraventricular na Gravidez: Um Caso Clínico

Keywords: Pregnancy Complications; Tachycardia, Supraventricular
Palavras-chave: Complicações na Gravidez; Taquicardia Supraventricular

Dear Editor,

Supraventricular tachycardia (SVT) is the most common arrhythmia during pregnancy, with a higher incidence in the third trimester due to physiological hemodynamic, hormonal, and autonomic changes.[1] Although most episodes are well tolerated, some cases may lead to maternal hemodynamic instability and potential fetal compromise, posing diagnostic and therapeutic challenges.[2]

We report the case of a 30-year-old woman at 34+6 weeks of gestation, with no known structural heart disease, who presented to the emergency department with sudden-onset palpitations, chest pain and dyspnea, accompanied by nausea and vomiting. On admission, her heart rate was 200 beats per minute, blood pressure was 120/65 mmHg, and oxygen saturation was 100%. An electrocardiogram revealed a regular wide QRS tachycardia consistent with SVT with aberrant conduction (Fig. 1A).

Initial management included vagal maneuvers, which were unsuccessful, followed by synchronized electrical cardioversion under sedation. Two attempts at 150 J and 200 J failed to restore sinus rhythm. Pharmacological cardioversion with intravenous adenosine was then administered (6 mg followed by two doses of 12 mg), without effect. A third synchronized electrical cardioversion at 200 J successfully restored sinus rhythm (Fig. 1B).[3-5] Continuous fetal monitoring was maintained throughout the procedure, with no evidence of fetal distress. Given the persistent tachycardia at 200 bpm associated with chest pain and dyspnea in the setting of advanced pregnancy, early electrical cardioversion was prioritized after unsuccessful vagal maneuvers due to concern for potential maternal hemodynamic deterioration.[4]

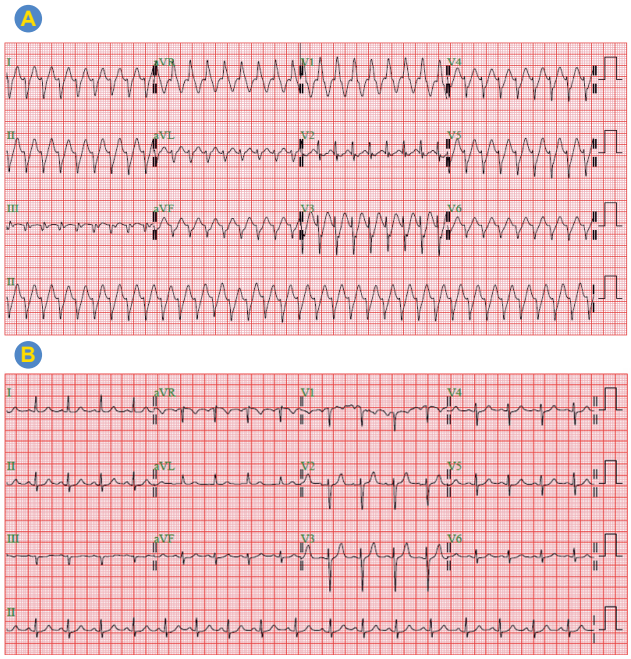

Figure 1 – (A) ECG showing the supraventricular tachycardia. (B) ECG showing synus rhythm after cardioversion.

The patient remained asymptomatic during hospitalization. A transthoracic echocardiography showed no structural abnormalities, and treatment with bisoprolol 2.5 mg daily was initiated.[3,5] The remainder of the pregnancy was uneventful, and vaginal delivery occurred at 39 weeks of gestation without maternal or neonatal complications; epidural analgesia was performed during labor to reduce catecholamine release and minimize the risk of arrhythmia recurrence. No recurrence of arrhythmia was observed during pregnancy or postpartum.

This case highlights the importance of a stepwise approach to SVT management during pregnancy. While pharmacological therapy is considered first-line in hemodynamically stable patients, electrical cardioversion is a safe and effective option when initial measures fail or when there is concern for clinical deterioration.[1,3,5] Catheter ablation was not considered necessary, as sinus rhythm was successfully restored and remained stable throughout follow-up. Individualized decision-making and a multidisciplinary approach are essential to ensure optimal maternal and fetal outcomes.

ACKNOWLEDGMENTS

The authors declare that no AI tools were used during the preparation of this work.

AUTHOR CONTRIBUTIONS

JMM: Conception and design of the study, data collection, manuscript drafting.

MLO: Data interpretation, critical revision of the manuscript.

CBH: Data collection, critical revision of the manuscript.

All authors approved the final version to be published.

PROTECTION OF HUMANS AND ANIMALS

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in October 2024.

DATA CONFIDENTIALITY

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

PATIENT CONSENT

Obtained.

CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

FUNDING SOURCES

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

REFERENCES

1. Ramlakhan KP, Kauling RM, Schenkelaars N, Segers D, Yap SC, Post MC, et al. Supraventricular arrhythmia in pregnancy. Heart. 2022;108:1674-81.
2. Tamirisa KP, Elkayam U, Briller JE, Mason PK, Pillarisetti J, Merchant FM, et al. Arrhythmias in pregnancy. JACC Clin Electrophysiol. 2022;8:120-35.
3. De Backer J, Haugaa KH, Hasselberg NE, de Hosson M, Brida M, Castelletti S, et al. 2025 ESC Guidelines for the management of cardiovascular disease and pregnancy: developed by the Task Force on the Management of Cardiovascular Disease and Pregnancy of the European Society of Cardiology (ESC). Eur Heart J. 2025;46:4462-568.
4. Peterson AA, Arendt KW, Sharpe EE. Management of supraventricular tachycardia in pregnancy. Pain Med. 2020;21:426-8.
5. Brugada J, Katritsis DG, Arbelo E, Arribas F, Bax JJ, Blomström-Lundqvist C, et al. 2019 ESC Guidelines for the management of patients with supraventricular tachycardia. Eur Heart J. 2020;41:655-720.

Julia MARTÍN MARTÍNEZ [1], Mariano LAGUNA OLMOS [1], Cristina BUJEDA HERNÁNDEZ [1]
1. Department of Obstetrics and Gynecology. San Pedro University Hospital. Logroño. Spain.
✉ **Autor correspondente:** Julia Martín Martínez. juliamartinm98@gmail.com
Recebido/*Received*: 04/03/2026 - **Aceite/*Accepted*:** 02/06/2026 - **Publicado/*Published*:** 01/09/2026

https://doi.org/10.20344/amp.24683