PLACE 2026
PLATFORM OF LABORATORIES FOR ADVANCES IN CARDIAC EXPERIENCE

CONGRESSO
ROMA, 25 - 27 Giugno 2026

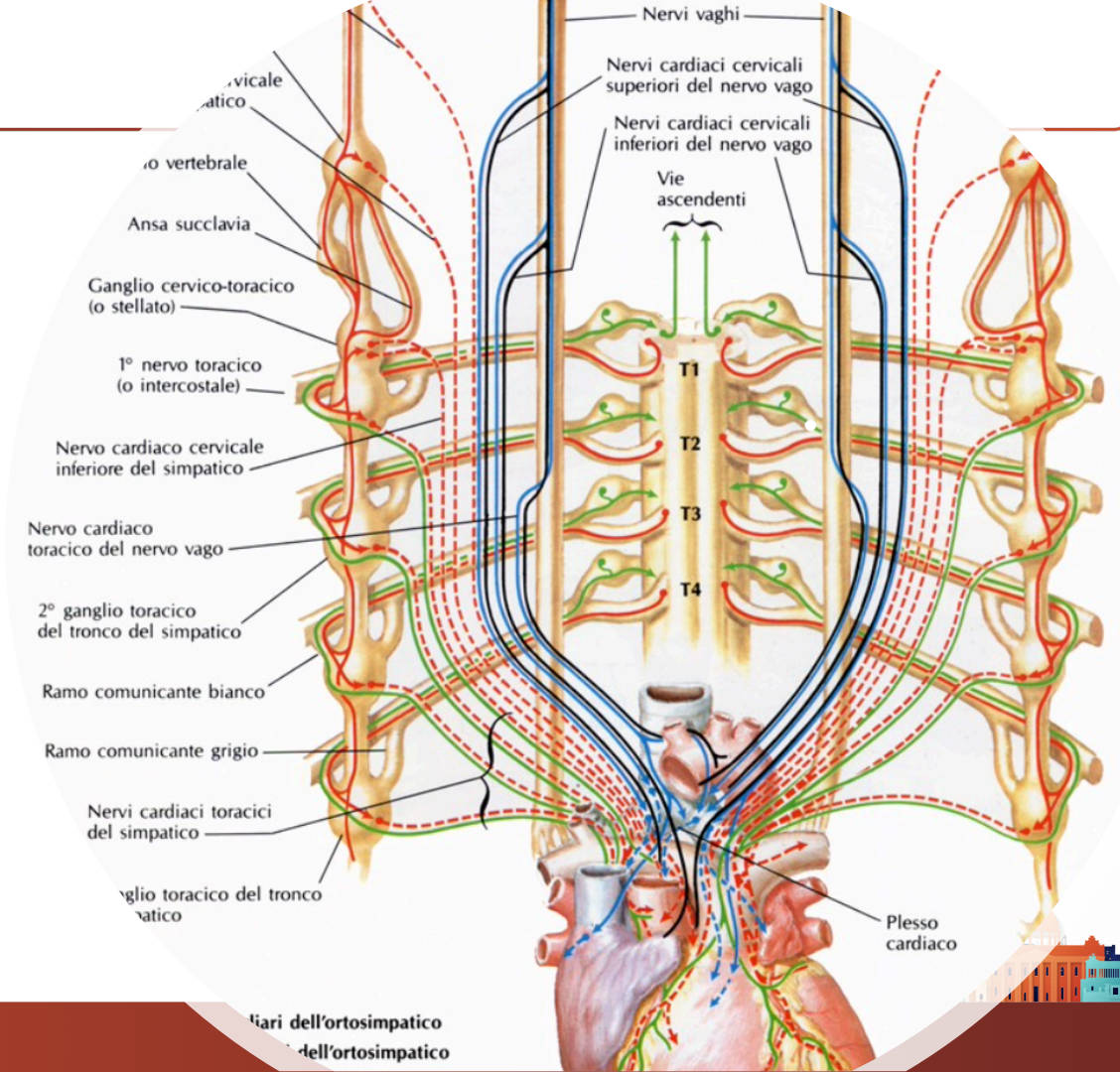
Cardiac pacing and electrophysiology:

# Stellate Ganglion Block for Arrhythmias Post-Heart Transplant: still an option?


*Benedetta De Guidi*, Filippo Angelini, Carol Gravinese, Antonio Toscano, Simone Frea, Arianna Morena, Guglielmo Gallone, Andrea Saglietto, Matteo Anselmino, Marco Minniti, Maurizio Berardino, Paolo Cotogni, Gaetano Maria De Ferrari, Veronica Dusi

***Benedetta De Guidi, MD***
Cardiology, Department of Medical Sciences,
University of Turin, Italy


Orthotopic heart transplantation (OHT) involves surgical transection of sympathetic post-ganglionic fibers, causing transient complete postganglionic sympathetic denervation



# Sympathetic reinnervation after Heart transplantation

(462)

Relationship Between Cardiac

Aut

Car

Tra

Ma

M. Hab

F. Mosc

ESC
European Heart Journal (2018) **39**, 1799–1806

CLINICAL REVIEW

RESEARCH ARTICLE | Originally Published 8 July 2002 |

Check for updates

Re

Avis

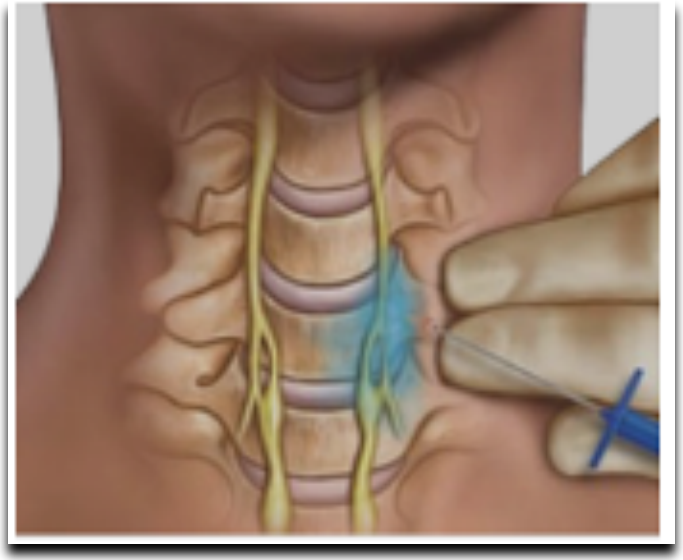
[1]Divisio

Received

## Clinical Determinants of Ventricular Sympathetic Reinnervation After Orthotopic Heart Transplantation

Frank M. Bengel, MD, Peter Ueberfuhr, MD, Thomas Hesse, MS, Nina Schiepel, MS, Sibylle I. Ziegler, PhD, Siegfried Scholz, MD, Stephan G. Nekolla, PhD, Bruno Reichart, MD, and Markus Schwaiger, MD | AUTHOR INFO & AFFILIATIONS

Circulation • Volume 106, Number 7 • https://doi.org/10.1161/01.CIR.0000025631.68522.9D



**Is PSGB effective in transplanted hearts?**

# Clinical case n. 1

27-year-old

**APR**

- In 01/2020, at the age of 22, OHT for severe ventricular dysfunction in Becker muscular dystrophy and prevalent cardiac involvement.

**APP**

- In 03/2025, cardiogenic shock SCAI C for acute humoral rejection (2R-ex 3a) and concomitant multivessel coronary artery disease requiring tMCS (Impella)
- Rapid polymorphic VTs (HR 300 bpm) refractory to antiarrhythmic drugs following weaning attempts from Impella → three PSGB were performed

# Clinical case n. 1

| | PSGB n. 1 | After 47h | PSGB n. 2 | After 48h | PSGB n. 3 |
|---|---|---|---|---|---|
| Inotropic therapy at the time of block | Dobutamine 8,5 mcg/Kg/min, Levosimendan 0.05 mcg/Kg/min | | Dobutamine 8,5 mcg/Kg/min | | Dobutamine 8,5 mcg/Kg/min |
| Trigger | P6 → P5 + CPV | | P6 → P5 | | / |
| VT cycle length (ms) | 200 | | 200 | | 272 |
| Ongoing pharmacological therapy | Lidocaine 40 mg + 28 mcg/kg/min | | Amiodarone 0,6 mg/min, Lidocaine 100 mg + 30 mcg/kg/min | | Amiodarone 0,6 mg/min,, Lidocaine 23 mcg/kg/min |
| DC-shock provided before PSGB | 1 | | 2 | | 1 |
| Dosages of anesthetics for PSGB | Lidocaine 100 mg, ropivacaine 100 mg | | Lidocaine 100 mg, ropivacaine 100 mg | | Lidocaine 50 mg, ropivacaine 100 mg |
| Effectiveness in the next 24 hours | Yes | | Yes | | No (recurrences after 30 min, deep sedation needed) |
| Complications | / | | Mild hematoma | | Dizziness |

# Clinical case n. 2

66-year-old

**APR**

- 12/2023 OHT after heart failure from non-ischemic dilated cardiomyopathy.

**APP**

- 06/2025 cardiogenic shock SCAI C for acute cellular rejection (3R-ex4) after self-discontinuing medications. Biventricular dysfunction requiring diuretics, vasodilators, adrenaline, and IABP
- Hospitalization was complicated by atypical FLA poorly tolerated hemodynamically (HR 132 bpm, BP 77/60 mmHg) → PSGB (Lidocaine 100 mg, ropivacaine 100 mg).

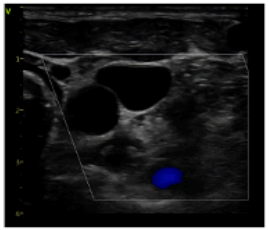
# Clinical case n. 1

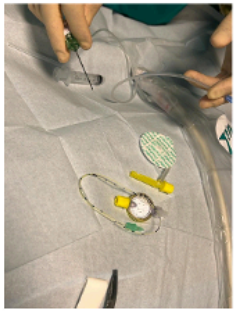
| | Pre-PSGB | 1h post-PSGB | 12h post-PSGB | 24h –post PSGB |
|---|---|---|---|---|
| Rhythm | FLA | FLA | FLA | FLA |
| HR (bpm) | 130 | 120 | 115 | 115 |
| BP (mmHg) | 77/60 | 100/50 | 134/67 | 120/60 |
| Antiarrhythmic therapy | Amiodarone300 mg + 1 mg/min | Amiodarone 1 mg/ min | Amiodarone 0,5 mg/ min | Amiodarone 0,5 mg/ min |
| Inotropic therapy | Adrenaline 0.07 mcg/ kg/min | Adrenaline 0.07 mcg/ kg/min | Adrenaline 0.07 mcg/ kg/min | Adrenaline 0.07 mcg/ kg/min |
| Complications | / | Left upper limb weakness | / | / |

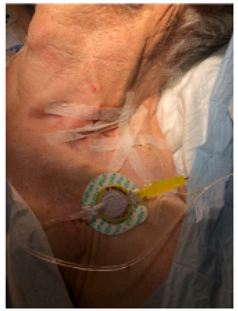
# Conclusions

- Heterogeneous patterns of reinnervation, together with other pathological conditions, such as residual fibrotic scar tissue, immunologic phenomena, and the development of cardiac allograft vasculopathy, may contribute to a high burden of arrhythmias
- These clinical cases indirectly suggest that late post-transplant cardiac sympathetic reinnervation clinically affects both the atrioventricular node and the common ventricular myocardium.
- PLSGB could therefore represent a therapeutic option in the management of VT even after heart transplantation.
- Further data is needed to define the role of PLSGB in the management of supraventricular arrhythmia (rhythm and/or rate control).

# 16 Novembre 2026
# Gestione avanzata dello storm aritmico in terapia intensiva e blocco percutaneo del ganglio stellato







UNIVERSITÀ DI TORINO

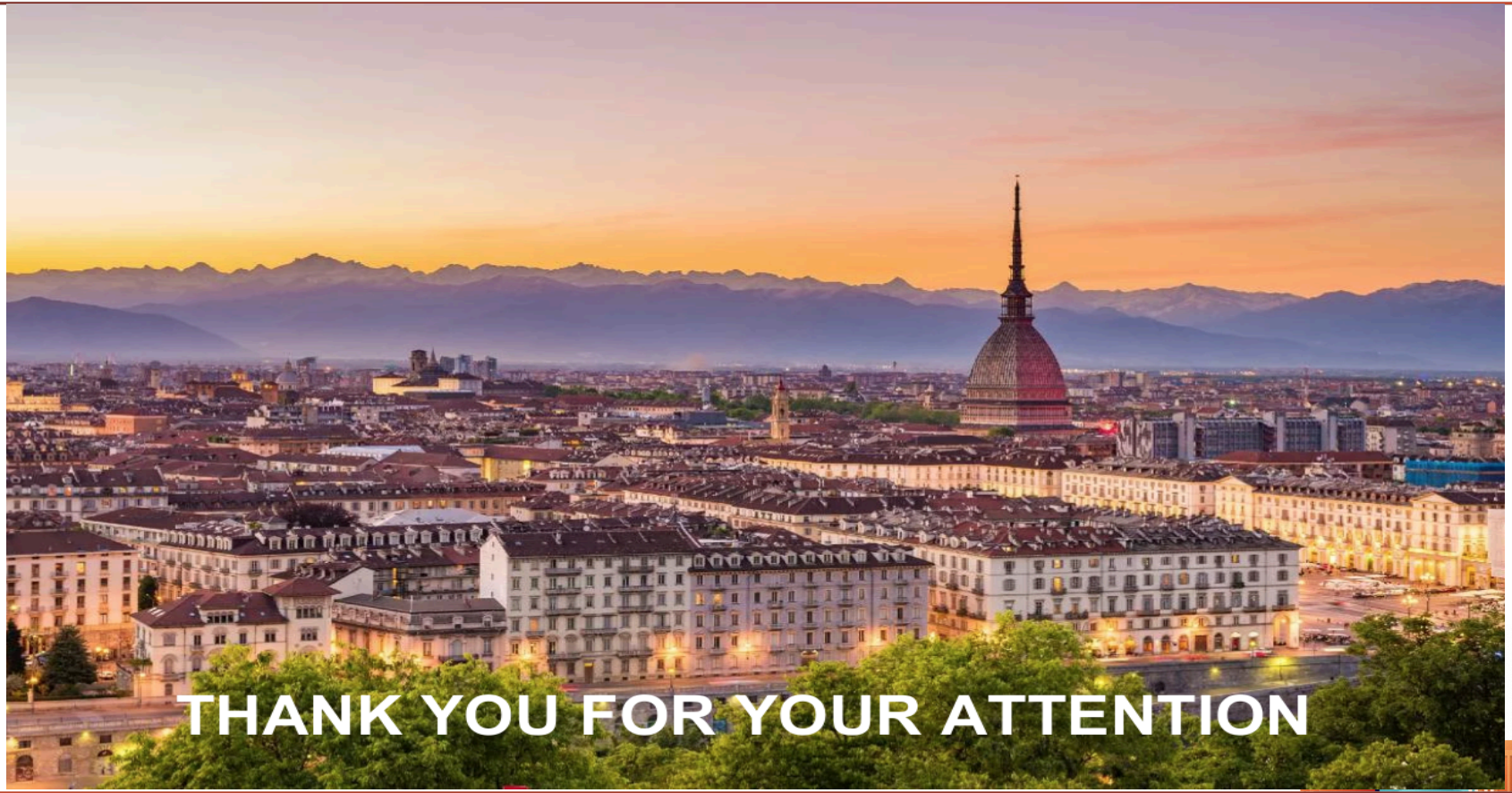
**9.2 ECM**

Advanced ES management

**Responsabili Scientifici:** Veronica Dusi, Filippo Angelini, Gaetano Maria De Ferrari

**Segreteria UniTo Formazione ECM**
**Tel**. 011 6709549
**Email**: eventiecm.dam@unito.it

veronica.dusi@unito.it
filippoangelini90@gmail.com


THANK YOU FOR YOUR ATTENTION