







Challenges and approaches in nursing care for patients with bilateral subclavian artery stenosis – a case report

 Petra Kušenić*,
 Biljana Hržić,
 Katarina Grandavec,
 Martina Vidak,
 Magdalena Kunić,
 Ivica Benko

Dubrava University Hospital,
Zagreb, Croatia

KEYWORDS: subclavian artery stenosis, pseudohypotension, pseudoschock, nursing care.

CITATION: *Cardiol Croat.* 2024;19(11-12):578. | <https://doi.org/10.15836/ccar2024.578>

***ADDRESS FOR CORRESPONDENCE:** Petra Kušenić, Klinička bolnica Dubrava, Avenija Gojka Šuška 6, HR-10000 Zagreb, Croatia. / Phone: +385-95-5266-886 / E-mail: petra.kusenic123@gmail.com

ORCID: Petra Kušenić, <https://orcid.org/0009-0008-8617-9932> • Biljana Hržić, <https://orcid.org/0000-0001-5441-0900>
Katarina Grandavec, <https://orcid.org/0000-0002-6421-6471> • Martina Vidak, <https://orcid.org/0009-0006-1973-8509>
Magdalena Kunić, <https://orcid.org/0000-0001-7402-8135> • Ivica Benko, <https://orcid.org/0000-0002-1878-0880>

Introduction: Bilateral subclavian artery stenosis, which involves the narrowing of both subclavian arteries, can lead to significant clinical complications such as pseudohypotension, upper extremity ischemia, and subclavian steal syndrome. This condition is relatively rare, with a prevalence of 2-4% in the general population, and is typically characterized by a difference in blood pressure between the upper and lower extremities. If left untreated, complications can include ischemic stroke and respiratory issues.¹

Case report: 65-year-old male patient was admitted following successful resuscitation after a cardiopulmonary arrest. Initially, he was mechanically ventilated and hypotensive, with ultrasound revealing an abdominal aortic aneurysm. Further diagnostic work uncovered an iliac artery occlusion, which was successfully treated, but the patient remained hypotensive. A significant difference in blood pressure between the upper and lower extremities prompted further investigation, revealing stenosis in both subclavian arteries. Due to these stenoses, standard blood pressure measurements from the arms were unreliable, necessitating the use of femoral artery monitoring. This approach provided accurate hemodynamic data, as arm measurements would have produced falsely low values due to the subclavian artery stenosis.

Conclusion: In cases of subclavian artery stenosis, reduced blood flow to the upper extremities can cause falsely low blood pressure readings in the arms, potentially leading to incorrect conclusions about systemic hypotension or shock. Continuous monitoring of blood pressure through appropriate methods is critical to accurately assess the patient's condition. In terms of nursing care, it is essential to continuously monitor and record blood pressure values, adjusting therapy accordingly based on these readings. Special attention should be paid to the patient's hemodynamic stability. This situation also highlights the need for additional training for nursing staff to properly interpret blood pressure readings and respond promptly to any changes in the patient's condition.

RECEIVED:
October 12, 2024

ACCEPTED:
October 31, 2024



LITERATURE

1. Salman R, Hornsby J, Wright LJ, Elsaid T, Timmons G, Mudawi A, et al. Treatment of subclavian artery stenosis: A case series. *Int J Surg Case Rep.* 2016;19:69-74. <https://doi.org/10.1016/j.ijscr.2015.12.011>