Subcutaneous implantable cardioverter defibrillator as primary prevention of sudden cardiac death: a case report

**KEYWORDS:** sudden cardiac death, subcutaneous implantable cardioverter defibrillator, health care.

**CITATION:** Cardiol Croat. 2024;19(1-2):26. | [https://doi.org/10.15836/ccar.2024.26](https://doi.org/10.15836/ccar.2024.26)

**ADDRESS FOR CORRESPONDENCE:** Ante Komazin, Klinički bolnički centar Sestre milosrdnice, Vinogradska 29, HR-10000 Zagreb, Croatia. / Phone: +385-1-378-7933 / E-mail: ante.komazin23@gmail.com

**ORCID:** Ante Komazin, [https://orcid.org/0009-0003-9515-4319](https://orcid.org/0009-0003-9515-4319) • Gordana Hursa, [https://orcid.org/0000-0001-9118-9707](https://orcid.org/0000-0001-9118-9707) • Sanja Keleković, [https://orcid.org/0000-0003-4951-876X](https://orcid.org/0000-0003-4951-876X) • Tomislav Pijetlović, [https://orcid.org/0000-0002-4499-4428](https://orcid.org/0000-0002-4499-4428) • Miroslav Geček, [https://orcid.org/0000-0003-2118-8148](https://orcid.org/0000-0003-2118-8148)

Sudden cardiac death is in most cases caused by ventricular tachycardia and ventricular fibrillation. The standard therapy for the prevention of sudden cardiac death is transvenous implantable cardioverter defibrillators, i.e. ICD devices that detect ventricular arrhythmias and deliver shocks. In the last few years, the option of implantation of subcutaneous implantable cardioverter defibrillator (S-ICD) is often used. S – ICD is an implantable subcutaneous medical device for detecting and stopping ventricular tachycardia and ventricular fibrillation in patients at risk of sudden cardiac arrest. It is mainly implanted on the left side of the chest wall under the armpit. It is also the first and only device that provides protection against sudden cardiac arrest by leaving the heart and vasculature intact. Unlike the transvenous ICD, the S-ICD has much fewer possible complications during placement and those related to the lead. However, it does not have the ability to stimulate, therefore it cannot provide stimulation therapy against tachycardia, bradycardia and resynchronization therapy.1-5

We will briefly explain what an S-ICD is, what are the main differences between an S-ICD and an ordinary ICD, and indicate the indications for its placement. We will talk about perioperative preparation of the patient for S-ICD placement, intraoperative health care and postoperative patient care and complications after placement. We will also present a case of a patient at risk of sudden cardiac death who was a good candidate for S-ICD implantation.

**LITERATURE**


2. Min M, editor. Cardiac Pacing and Monitoring - New Methods, Modern Devices [Internet]. IntechOpen; 2019. Available from: [http://dx.doi.org/10.5772/intechopen.73811](http://dx.doi.org/10.5772/intechopen.73811)

