

## **Abstract**

In recent years, clinical studies have shown that the most effective method of treatment to reduce the incidence of sudden cardiac death in patients at increased risk of malignant arrhythmias is to provide the patient with an implantable cardioverter-defibrillator (ICD). Complications associated with the transvenous implanted system, especially lead disorders and systemic infections, and have led to the development of a so-called subcutaneous defibrillator, which is thought to minimize these complications. Despite the medical benefits of implantable defibrillator treatment, which is generally well accepted by patients, anxiety, depression, and deterioration in their quality of life have been reported in clinical trials examining patients' psychopathology and quality of life after defibrillator implantation.

**Methodology:** The objective of the diploma thesis was to find out which group of patients better assesses the quality of life depending on the type of implanted defibrillation device (ICD and S-ICD). For the purposes of the survey, the method of quantitative research was chosen in the form of its own questionnaire survey. The questionnaire contained a total of seventeen questions in which patients evaluated quality of life in five areas. Patients who met the following criteria were included in the study set: age over 18 years of age, medical condition for at least three months after implantation of a defibrillator (ICD and S-ICD), and especially voluntary participation in the study. Data collection took place from July 2019 to the end of February 2020 in the Prague cardio centre.

**Main outcomes:** The research sample consisted of a total of 61 patients, of which a total of 31 patients had implanted ICDs (51 %) and 30 patients had S-ICDs (49 %). A total of 28 women (46 %) and 33 men (54 %) participated in the study. We recorded a higher incidence of psychological changes in patients with implanted ICDs (48 %) compared to patients with S-ICDs (33 %). Patients with ICD were most often bothered by insomnia (23 %), fear (13 %) and anxiety (10 %). In general, the highest percentage of psychological changes after implantation of a defibrillation device (ICD and S-ICD) was observed in patients aged 46 to 75 years.

**Conclusion and recommendations:** The outcomes of our research showed that the quality of life of patients depending on the type of implanted defibrillation device (ICD and S-ICD) was not negatively affected, it was perceived comparably by both groups of patients, and at a good level. Despite the satisfactory results of the quality-of-life assessment in both groups of patients, we still recommend continuing the long-term follow-up at regular intervals with the involvement of a multidisciplinary team.

**Keywords:** malignant arrhythmia, prevention of sudden cardiac death, defibrillator implantation, subcutaneous defibrillator, transvenous defibrillator, quality of life