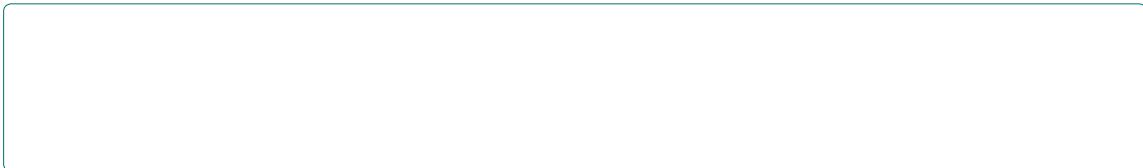




Journal of Medical Implants & Surgery

Open Access

ecug tgr tv ctv eng c ou v rt fg c e ortg gpu g
orncpvcv p rt egf tg cpf en p ecn ve ogu v t



*Corresponding author: Théo Laurent, Department of Plastic, Reconstructive,

ICDs (S-ICDs) represent a novel alternative to transvenous systems; offering advantages such as simplified implantation; reduced risk of lead-related complications; and compatibility with magnetic resonance imaging. Leadless ICDs have further expanded the options for device therapy by eliminating the need for intravascular leads entirely; thereby reducing the risk of lead-related complications and providing a less invasive alternative for select patients. Additionally; advancements in sensing algorithms; arrhythmia discrimination algorithms; and remote monitoring capabilities have enhanced the reliability and efficiency of ICD therapy; enabling early detection of arrhythmic events and timely intervention.

C

Clinical outcomes associated with implantable cardioverter defibrillators (ICDs) play a crucial role in evaluating the effectiveness and impact of this life-saving therapy. Several key clinical outcomes are commonly assessed in studies evaluating ICD therapy, including:

Mortality: One of the primary endpoints in clinical trials of ICD therapy is the reduction in all-cause mortality. Numerous studies, including landmark trials like the MADIT and SCD-HeFT trials, have demonstrated a significant reduction in mortality with ICD therapy compared to standard medical therapy in high-risk patient

reducing and 7d in 7116 Tw 1.575 -1.83 TdR reduction in sudden cardiac death (CD):

CD event, t

including both types

successful termination of arrhythmias without the need for shock.

Clinical trials show (statistically) 0.6 reduction in CD:

reducing and 7d in 0706 Tw 1.575 -1.83 TdQ quality of life:

reduced physical

interventions,

reducing and 7d

1.575 -1.83

TdC cost-detectiveness:

therapy

cost-effectiveness

reducing and 7d in preventing sudden cardiac death

(CD)

arrhythmias and terminating

CDs

psychological well-being and peace of mind for most recipients. Patients report increased confidence in their ability to manage their condition and decreased fear of sudden death. Although ICD therapy is generally safe and well-tolerated, device-related complications can occur. Common complications include infection at the implantation site, lead malfunction (e.g., fracture or dislodgement), inappropriate shocks, and device-related discomfort. However, the overall incidence of complications is relatively low, and the benefits of ICD therapy typically outweigh the risks [8].

D...

Findings from clinical trials and observational studies support the critical role of ICDs in preventing SCD and reducing mortality in

studies unequivocally supports the pivotal role of implantable cardioverter de brillators (ICDs) in preventing sudden cardiac death (SCD) and reducing mortality in high-risk patient populations. These studies have consistently demonstrated significant reductions in all-cause mortality, as well as substantial decreases in the incidence of SCD events, with the use of ICD therapy compared to conventional medical therapy or placebo. Landmark trials such as MADIT, SCD-HeFT, and