An Analysis of 218 Pace-Makers and ICD Explanted in the Crematorium Hamburg-Öjendorf in the Year 2000.

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Research Purpose:

In a cross-section analysis the post mortem functional state as well as the role of the pace-maker (PM) or Implantable Cardioverter/Defibrillator (ICD) in the death are examined.

Furthermore the correlation between the cause of death as given in the death certificate and the internal PM/ICD data is investigated.

Material and Methods:

In 15308 cases the generator of the PM/ICD was explanted during the second external examination before cremation in the crematorium Hamburg-Öjendorf. 212 pace-makers as well as 6 implantable cardioverter defibrillators were found during the year 2000.

Results:

Statistics of the duration implantation ($4 \pm 3.2a$, N=190 cases), the age of the patients at implantation and at death ($80 \pm 8.7a$ vs. $84 \pm 8.6a$, N=190), gender distribution (111 female vs. 103 male, N=214), state of the generator (39 ERI, 13 EOL, 4 in need of a reset to function correctly – N=214), residence (102 own home, 68 old peoples home, N=214) etc. and their correlations are presented.

A high degree of non-complicance with regard to the follow-up checks of the PM/ICD was fould (max. $2859d$ without follow-up), contrasting with a higher than average age of the PM patients. A fifth of the PMs were in the 'ERI' state (39/214), 8% were in a critical state ('EOL') or without function (17/214). All modern PMs recently implanted worked flawlessly—with one exception.

The data stored within the PM were used to reconstruct the cause and timing of death in isolated cases (death due to magnet reversion of an ICD, death by cardial decompensation due to battery exhaustion).