Pocket infection does not always occur soon after device operation

HIROSHI FURUSHO
Keisuke Usuda
Satoshi Niwa
Toyonobu Tsuda
Takeshi Kato
Kenji Sakata
Soichiro Usui
Kenshi Hayashi
Masayuki Takamura

**Introduction**: Even infection is localized at the device-pocket, all device extraction is recommended as class I indication. It is well known that pocket infection occur more often after device exchange than after new implantation. However, the duration between the device operation and the infection event and also the background-factor affecting the duration are not well-known.

**Methods**: We retrospectively studied 48 patients who underwent transvenous lead extraction in our hospital after 2011. Among them, 26 cases (18 males) who suffered pocket-only infections (group PI) were included, and also, 14 non-infected cases (group N) were studied as control.

**Result**: Mean age of group PI was 70±14 years (62±11 in group N, p=0.08), and their body-mass index was 21±4 (24±2.9 in group N, p=0.03). Their underlying arrhythmia were 3 sick-sinus syndrome, 9 atrioventricular block, 3 bradycardic atrial fibrillation, and 6 ventricular-tachycardia / -fibrillation. Nineteen pacemakers and 7 Implantable cardioverter defibrillator (ICD)s had been implanted. Ten suffered hypertension, 6 diabetes mellitus, 6 coronary artery diseases and 1 renal failure on hemodialysis. Causative agents included 8 CNS, 3 Streptococcus epidermidis, 3 MSSA, 1 MRSA, and 3 Corynebacterium. At the pocket site, device or leads were prolapsed from the skin in 9 cases, and discharge of pus was seen in 13 cases on admission. Mean duration from last device implantation or exchange operation was shorter in group P (1.7±1.9 years vs 4.3±2.6 years in group N, p=0.003), among the 26 patients in group, the duration was less than 3 mouths in 4 cases, 3 months to 1 year in 9 cases, and more than 1 year in 13 (50%) cases.

**Conclusion**: Pocket-only infection cases were rather old, skinny, and having some infection risks. The triggering infection for extraction in these cases does not always occur close to their previous operation. Therefore, continuous care on pocket-site may be important for such high-risk patients.