

Key Session 3

[O30] WHAT CAN THE REGISTERS TELL US ABOUT INFECTION AND WHAT CAN THEY NOT TELL US?

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The national arthroplasty registers function as a continuous post-marketing surveillance of arthroplasties. Rear events after joint replacements as infection, are suitable for studying in such huge databases. The interpretation of these data requires, however, some knowledge.

Reported revisions due to infection to the Norwegian Hip Arthroplasty Register (NAR) have increased continuously during the last 29 years; both for cemented and uncemented THA. For all groups the increase has been most pronounced the first postoperative year. Increased reported frequency of revisions to a national register is, however, not necessary the same as increased incidence of infected THA. Although a true increase in incidence of infection after THA has probably taken place, our findings are also influenced by improved diagnostics of infection, changed revision policy and improved reporting of revision due to deep infection.

National registers are suitable to study different variables (as gender, age, comorbidity, implants, theatre ventilation, antibiotic prophylaxis), and comparing different surgical procedures (as in revision of infected arthroplasties).

The reliability of the data in a register is dependent on sufficient coverage (how many of the hospitals in the country are reporting) and completeness (how many of the operations, both primary operations and reoperations, from each hospital are reported). The validity of the infection diagnosis in the registers has been questioned, since the diagnosis is depending on the assessment of the reporting surgeon immediately after surgery and before microbiological confirmation. Registers tend to underestimate the incidence of deep infection as revisions (i.e. reoperations with removal or exchange of part of or the whole implant) are record more reliable than soft tissue procedures for infections.

Register studies are for practical and economic reasons suitable if long term comparisons of several implants are to be done. And they show us how the treatment functions in real life (high external validity). Randomized controlled trials (RCT) have advantages as to prove a hypothesis, ability to control for known variables, and for clearly defined problem in a clearly defined patient group. We need both register and randomised studies, they provide different information. One is not better than the other - they are complementary.