Summary of research proposal LROI

Title:

Anticoagulant administration in arthroplasty: association with revision for prosthetic joint infection? A nationwide study with LROI and SFK registry data

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Abstract:

Hip and knee arthroplasty are very successful surgical procedures in terms of improvement in quality of life and cost-effectiveness. However, one of the most devastating complications is Prosthetic Joint Infection (PJI). With a reported incidence of 1.2% in the Netherlands, hundreds of patients are affected each year. In some cases, the infection is cured and the implant can be saved, albeit after a long duration of treatment. In other cases, implant removal is indicated. Hence, PJI leads to high morbidity, prolonged hospital stay, high costs and sometimes implant removal or even death. Therefore, it's important to identify risk factors for infection and optimize peri-operative circumstances.

There is an increasing debate on anticoagulants and their role in PJI. In theory, these medications can lead to increased peri-operative blood loss, hematoma and prolonged wound leakage, which are all associated with PJI. However, a clear association between anticoagulants and PJI has not been reported, to the best of our knowledge. And simply discontinuing anticoagulants could lead to thromboembolic events (TEE).

In this study, we will use the existing merged database of two national registries, LROI and SFK, to evaluate the potential association of pre- and peri-operative anticoagulants usage and PJI in primary THA/TKA patients (2013-2022). Our objective is to enhance the precision of risk assessment and to provide patients and surgeons with accurate information concerning these risks. Additionally, with regards to anti-thrombotic therapy (thromboprophylaxis) after arthroplasty, we will investigate whether new anticoagulants (DOAC's) are associated with a higher PJI incidence compared to low molecular weight heparins.

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