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Major Joint Replacement Surgery: What Are the Anesthetic Considerations? (Experience of Moulay Ismail Military Hospital in Meknes: A Study of 54 Cases)

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Introduction

Anaesthesia for major joint replacement surgery encompasses a broad field, both in clinical practice and in fundamental research. In our setting, this type of surgery mainly involves total hip arthroplasty (THA) and total knee arthroplasty (TKA).

The specific aspects of anaesthesia for major joint replacement surgery include:

- Preoperatively: assessment of infectious, haemorrhagic, and thromboembolic risks, as well as informing the patient about the planned analgesic management.
- Intraoperatively: patient positioning and management of the specific risks associated with the use of bone cement, among others.
- Postoperatively: postoperative analgesia and prevention of postoperative thromboembolic complications.

This was a retrospective study involving 54 patients who underwent major joint replacement surgery: 25 patients underwent total hip arthroplasty and 29 underwent total knee arthroplasty. The procedures were performed in the operating room of Moulay Ismail Military Hospital in Meknes over a three-year period, from January 1, 2019, to December 31, 2021. The aim of this study was to report the experience of the Department of Anaesthesiology and the Department of Trauma and Orthopaedic Surgery at

Moulay Ismail Military Hospital in Meknes with regard to major joint replacement surgery. In addition to examining perioperative anaesthetic management, we also assessed postoperative patient outcomes through telephone follow-up.

It should be noted, however, that the number of these procedures declined considerably during the study period because medical and paramedical staff were redeployed to various activities related to the COVID-19 pandemic. The mean age was 60.5 years in the THA group and 65.5 years in the TKA group. The sex ratio was 0.56, with a female predominance, in the THA group, and 0.32, also with a female predominance, in the TKA group. Primary coxarthrosis was the predominant indication for THA, while primary knee osteoarthritis was the predominant indication for TKA.

The most frequently used anaesthetic technique was regional anaesthesia combining spinal and epidural anaesthesia, used in 88% of THA procedures. In the TKA group, regional anaesthesia consisted either of combined spinal-epidural anaesthesia in 69% of cases or combined spinal anaesthesia and femoral nerve block in 17% of cases. General anaesthesia was used in 12% of THA procedures and 14% of TKA procedures.

The mean duration of surgery was 107 ± 23 minutes for THA and 89 ± 15 minutes for TKA. The incidence of intraoperative allogeneic blood transfusion was 9.26%.

In the total hip arthroplasty group, seven postoperative complications were recorded: one case of postoperative infection, two cases of aseptic loosening, three cases of dislocation, and one case of thrombophlebitis, with a mean follow-up period of 24 months. In the total knee arthroplasty group, four postoperative complications were recorded: two cases of postoperative infection, one case of aseptic loosening, no cases of dislocation, and one case of thrombophlebitis, with a mean follow-up period of 36 months. Based on the findings of this study, it is now necessary to establish a Moroccan national registry for major joint replacement surgery.

Such a registry would help standardize clinical practices, evaluate outcomes, and provide a basis for developing national consensus guidelines on anaesthesia for major joint replacement surgery.

Acknowledgement

None.

Conflict of Interest

No conflict of interest.