

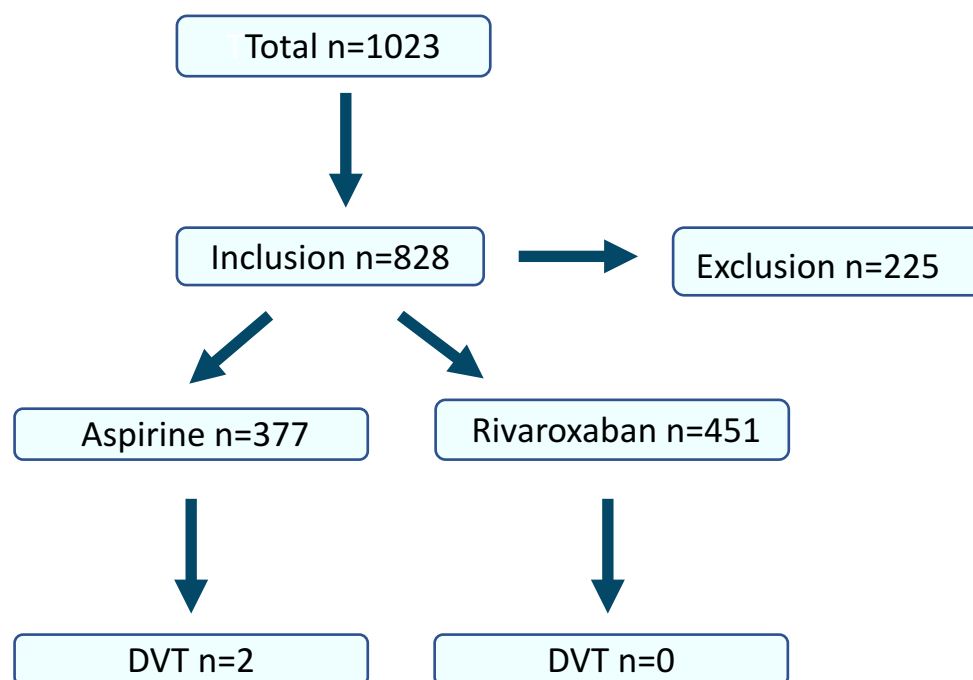
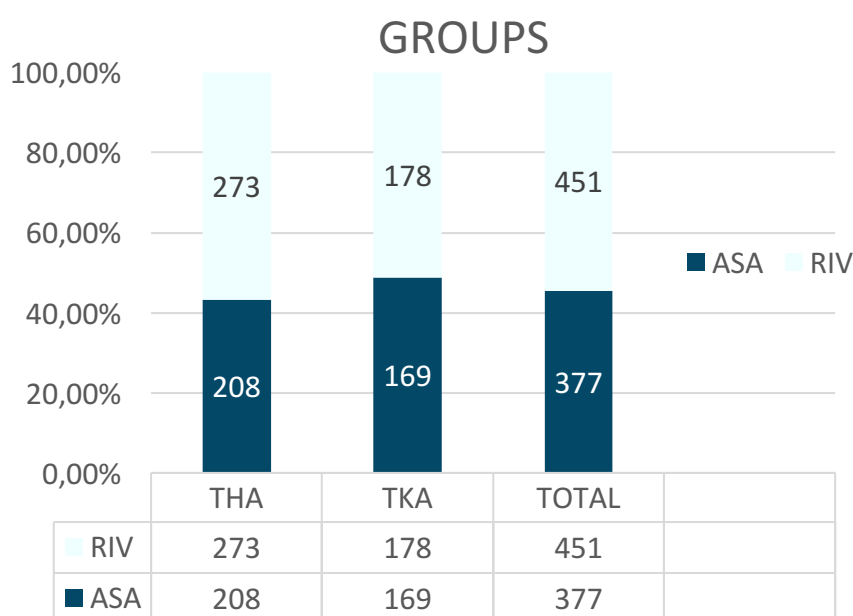
# USE OF ASPIRIN VERSUS RIVAROXABAN IN POSTOPERATIVE THROMBOEMBOLIC PROPHYLAXIS AFTER PRIMARY TOTAL HIP AND KNEE ARTHROPLASTY

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The Total Hip and Knee Arthroplasties have seen an increase in recent years due to population aging, leading to more thromboembolic post-operative complications. Different drugs are effective in preventing these complications, but none of them stands out<sup>1</sup>. We know the incidence of PE is 0.5% and of DVT is 1% after THA and TKA<sup>2</sup>. To date, we are not aware of any Swiss studies comparing the effectiveness of Aspirin with that of Rivaroxaban. The main objective of the study is to find out whether Aspirin is as effective as Rivaroxaban in thromboembolic prophylaxis in primary THA and TKA.

## METHOD

We included all patients who underwent primary THA or TKA between January 2017 and November 2020. Patients who presented previously thromboembolic event, admitted for fracture or revision surgery, or under preoperative therapeutic anticoagulation were excluded. All included patients received postoperative thromboembolic prophylaxis for a total of 4 weeks, with Heparin during hospitalization period followed by Rivaroxaban 10 mg once a day or by Aspirin 100 mg twice a day. The rehabilitation protocol was the same for all (full load bearing from day zero or day one). All patients who received Aspirin were included in the ERAS's protocol<sup>3</sup>. We used our computer database files to search thromboembolic events and deaths occurring within 90 days after surgery.



## RESULTS

828 patients were included (58 % THA; 42 % TKA). 54,5 % (n = 451) took Rivaroxaban and 45,5 % (n = 377) took Aspirin. Two cases of Deep Vein Thrombosis were observed with Aspirin (0.53 %), none occurred with Rivaroxaban. The difference was not significant (p = 0.125). We did not observe any deaths or pulmonary embolism. The two cases of deep vein thrombosis belong to the THA group, none occurred in TKA. One case of hemarthrosis was found in the TKA group with rivaroxaban.



## CONCLUSION

Aspirin and Rivaroxaban both appear to be effective in preventing thromboembolic events after primary THA or TKA<sup>4</sup>. Aspirin offers the possibility of rapid surgical revision in the event of post-operative hematoma or early acute infection, does not require laboratory monitoring and has very few side effects<sup>5,6</sup>. Its low cost and availability are also advantages. The exact dosage and the minimum prescription period remain controversial, requiring further randomized studies.

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2. ACCP GUIDELINES. Prevention of VTE in orthopedic Surgery Patients : Antithrombotic Therapy and Prevention of Thrombosis, 9th ed. Chest 2012.

3. Wainwright et al. Consensus statement for perioperative care in total hip replacement and total knee replacement surgery: Enhanced Recovery After Surgery (ERAS) Society recommendations. ERAS 2019.

4. Parvizi et al. Venous Thromboembolism Following Hip and Knee Arthroplasty. J Bone Joint Surgery 2017.

5. Lindquist et al. Comparison of Postoperative Bleeding in Total Hip and Knee Arthroplasty Patients Receiving Rivaroxaban, Enoxaparin, or Aspirin for Thromboprophylaxis. Clinical and Applied Thrombosis 2018.

6. Azboy et al. Aspirin and the prevention of venous thromboembolism following total joint arthroplasty. J Bone Joint Surgery 2017.