

Thromboembolic Disease II

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PREVENTION OF THROMBOEMBOLIC DISEASE IN ANTERIOR TOTAL HIP ARTHROPLASTY WITH ENTERIC-COATED ACETYLSALICYLIC ACID IS SAFE AND COST-EFFICIENT AND EFFECTIVE

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PURPOSE: To evaluate the efficacy and safety of enteric coated Acetylsalicylic acid (ECASA) in prevention of deep vein thrombosis (DVT), nonfatal and fatal pulmonary embolism (PE) in primary total hip arthroplasty (THA) performed through the anterior approach.

METHODS: A retrospective analysis of prospectively collected data of a consecutive series of 1016 patients (age range 22–90 years) who underwent anterior THA was performed. Exclusion criteria were previous hip surgery and preoperative anticoagulation therapy. The remaining 852 patients (430 males and 422 females) were analyzed. There were 733 unilateral procedures and 119 bilateral procedures. All surgeries were performed by a single surgeon. All patients had knee-high graduated elastic stockings (TEDS) and intermittent compression devices during surgery and for the duration of the hospital stay. All patients were mobilized weight bearing as tolerated within the first 12 hours after surgery. ECASA therapy was initiated immediately postoperatively. Patients received 325 mg of ECASA twice daily and a proton pump inhibitor daily for one month. All patients were examined with duplex ultrasonography prior to discharge. TED stockings were worn for one month postoperatively.

RESULTS: There were three cases of DVT (0.35%), all of which occurred in men in unilateral cases. One of these developed a non-fatal PE (0.11%). One was non-compliant with the dose of ECASA. One had a DVT in the contralateral leg. All three were treated successfully with anti-thrombotic therapy. There were no fatal PE cases. There were no cases of gastrointestinal bleeding.

CONCLUSION: ECASA is an inexpensive, safe and effective method for prophylaxis against thromboembolic disease after anterior approach THA. The use of ECASA as a pharmacologic agent combined with TED stockings and intermittent compression devices during the immediate perioperative period and early unrestricted mobilization produced superior results compared to current recommended guidelines by the ACCP.

CLINICAL IMPLICATIONS: Patients without increased risk factors for DVT are good candidates for prophylaxis therapy with ECASA combined with TED stockings and compression devices after primary anterior THA.

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Prevention of Thromboembolic Disease in Anterior Total Hip Arthroplasty with Acetylsalicylic Acid is Safe, Cost-efficient and Effective

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Introduction

- Patients undergoing elective total hip arthroplasty (THA) are at high risk for both asymptomatic (incidence, 40 to 60%) and symptomatic deep vein thrombosis (DVT, incidence, 2 to 5%) [1].
- Fatal pulmonary embolism (PE) occurs in approximately one patient per 500 elective THA [1].
- The ACCP currently recommends the routine use of low-molecular-weight heparin, fondaparinux, or adjusted dose of vitamin K antagonist for DVT prophylaxis in patients undergoing THA [1].
- Although potentially cost-efficient and safe [2], the ACCP recommends against use of enteric coated acetylsalicylic acid (ECASA) alone as prophylaxis [2].
- New approaches in THA (i.e. anterior approach [3]) are less invasive, allow earlier mobilization, and have lower morbidity compared to classical approaches.
- ECASA may have application in patients who undergo anterior THA.

Purpose

- To evaluate the efficacy and safety of enteric coated acetylsalicylic acid (ECASA) in the prevention of deep vein thrombosis (DVT) and pulmonary embolism in primary total hip arthroplasty performed through the anterior approach.

Materials and Methods

- Study design: retrospective analysis of prospectively collected data of a consecutive series of 1016 patients
- Exclusion criteria: fractures, periprosthetic fractures, previous hip surgery, revision THA, past history of DVT, chronic atrial fibrillation on warfarin therapy, patients on dipyridamole or clopidogrel bisulfate
- 852 patients with diagnosis of arthritis who underwent primary THA for analysis
- 430 male and 422 female patients
- Age range 22-90 years
- 733 unilateral and 119 bilateral procedures performed
- All surgery were performed by a single surgeon through the anterior approach (Fig. 1)

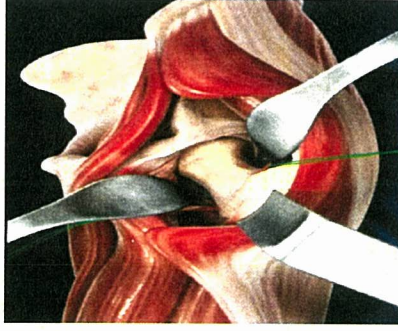


Fig. 1. The anterior approach to the hip allows the implantation of the prosthesis without detachment of any muscles through an internervous plane.

- All patients had knee-high Alternating Pressure (ALP) Venous Thromboembolism (VTE) prevention devices during surgery and for duration of the hospital stay (Figure 2).



Fig 2. ALP prevention device.

- Patients were mobilized weight-bearing as tolerated within the first 12 hours of therapy.
- ECASA therapy was initiated after surgery.
- Patients received 325 mg of ECASA twice a day and lansoprazole 30 mg/day for one month.
- Patients were examined with duplex ultrasound prior to discharge and in the postoperative period, if symptomatic.
- Ted stockings were worn for one month postoperatively.

Results

- There were no cases of fatal PE.
- There were three cases of DVT (0.35%).
- One of these had a non-fatal PE (0.11%).

- Of the other two, one patient was non-compliant with the correct dose of ECASA and had decreased the dosage to 81 mg/day after discharge from the hospital.
- The other patient had a DVT in the contralateral lower extremity detected by ultrasound prior to discharge from the hospital.
- All three cases of DVT were successfully treated with enoxaparin and warfarin therapy.
- All three cases of DVT occurred in men.
- No cases of DVT in patients who underwent simultaneous bilateral THA.
- No cases of symptomatic gastrointestinal bleeding.
- No wound hematomas that required surgical evacuation.

Conclusions

- ECASA is an inexpensive, safe and effective method of prophylaxis against thromboembolic disease after anterior THA.
- The use of ECASA combined with TED-stockings and intermediate compression devices during the immediate perioperative period in addition to early unrestricted mobilization produced superior results compared to the current recommended treatment by ACCP.