

Venous Thrombosis Posters

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Prevention of Thromboembolic Disease in Minimally Invasive Total Hip Arthroplasty With Acetylsalicylic Acid Is Safe, 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) via a minimally invasive posterior approach.

METHODS: A retrospective analysis of prospectively collected data of a consecutive series of 1202 patients (ages 15–90 years) who underwent THA was performed. Exclusion criteria were previous hip surgery and preoperative anticoagulant therapy. The remaining 546 patients (273 male and 273 female) were analyzed. There were 498 unilateral and 48 bilateral procedures. Surgeries were performed by Drs. Dorr and Long. All patients had knee-high graduated elastic stocking (TEDS) and intermittent compression devices during 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 therapy twice a day and a proton pump inhibitor daily for one month. All patients were examined with duplex ultrasonography prior to discharge. TED stockings were worn daily for one month.

RESULTS: There were two cases of distal DVT below the knee (0.37%) in one male and one female, both in the non-operative leg found prior to discharge. The two distal DVT resolved at one week. There was one pulmonary embolism (0.18%) at day 14 with a negative duplex at discharge. There were no fatalities, no cases of gastrointestinal bleeding and no wound hematomas requiring surgical exploration. All cases were seen in follow-up at 6 weeks and 3 months.

CONCLUSION: ECASA is an inexpensive, safe and effective method of prophylaxis against thrombo-embolic disease for primary hip arthroplasty. The use of ECASA combined with TED stockings, intermittent compression devices and early unrestricted mobilization produced superior results compared to current recommended practice 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, in-hospital compression devices and early unrestricted mobilization after minimally invasive posterior THA.

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Poster #351

Introduction

- Elective Total Hip Arthroplasty (THA) patients are at high risk for both asymptomatic (incidence 40-60%) and symptomatic Deep Vein Thrombosis (DVT, incidence 2-5%) [1]
- Death from Pulmonary Embolism (PE) occurs in approximately one patient per 500 elective THA [1]
- The ACCP continues to currently recommend 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 or minimal invasive posterior approach) allow for earlier mobilization, and lower morbidity compared to classical approaches
- ECASA may have application in patients who undergo minimally invasive posterior approach 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 a minimally invasive posterior approach

Materials and Methods

- Study design: retrospective analysis of prospectively collected data of a consecutive series of 1202 patients
- Exclusion criteria: previous hip surgery, revision THA, past history of DVT, preoperative anticoagulant therapy
- 546 patients with diagnosis of arthritis who underwent primary THA for analysis
- 273 male and 273 female patients
- Age range 15-90 years
- 498 unilateral and 48 bilateral procedures performed
- All surgery were performed by Dr. Dorr or Dr. Long through a minimally invasive posterior approach (Fig. 1)

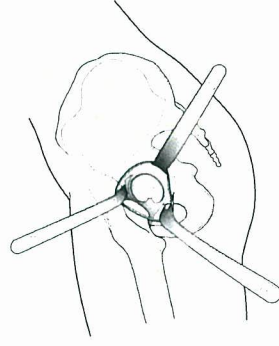


Fig. 1. The minimally invasive posterior approach to the hip allows the implantation of the prosthesis with a 8cm-10cm incision

Results

- There were 0 cases of fatal PE
- There were 2 cases of Distal DVT (0.36%); both in non-operative legs, one male and one female. Resolution of clot occurred in one week on Ecotrin confirmed by Duplex Scan
- One male patient with PE (0.18%) at day 14 (negative Duplex Scan at discharge) precipitated by gastroenteritis, dehydration, and bed rest for 2 days
- There were 0 cases of DVT in patients who underwent simultaneous bilateral THA
- There were 0 cases of Hematoma that required surgical intervention

- 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 Esomeprazole 40 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 day time only

Conclusions

- ECASA is an inexpensive, safe and effective method of prophylaxis against thrombo-embolic disease after a minimally invasive posterior approach 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