

The Incidence of Proximal Deep Vein Thrombosis After Elective Hip Arthroscopy: A Prospective Cohort Study

Nick Mohtadi, MD, MSc, FRCSC, CANADA

Kelly Johnston, MD, FRCSC, CANADA

Cinzia Gaudelli, MDCM, CANADA

Rhamona Barber, BKin, CAT(C), CANADA

Denise S. Chan, MBT, MSc, CANADA

Chirag Patel, MD, FRCPC, CANADA

Radana Beran, RN, CANADA

Elizabeth Mackay, MD FRCPC, CANADA

Elizabeth Oddone Paolucci, PhD, CANADA

Richard Walker, MD, FRCPC, CANADA

University of Calgary Sport Medicine Centre
Calgary, Alberta, CANADA

Summary:

This prospective study identified an overall incidence of DVT following elective hip arthroscopy at less than 5% with no incidence of proximal DVT or pulmonary embolism.

Abstract:

INTRODUCTION

The incidence of deep vein thrombosis (DVT) and pulmonary embolism (PE) in the hip arthroscopy literature is based on retrospective information. There is uncertainty with respect to the use of prophylaxis in arthroscopic hip surgery.

This prospective study assessed the incidence of DVT, as determined by Doppler Ultrasound, in patients who underwent elective hip arthroscopy without pharmacologic or mechanical prophylaxis.

METHODS

One-hundred-and-fifteen consecutive patients (55 males) aged >18 years (mean: 34.9) underwent elective hip arthroscopy with one of two surgeons as a day surgery procedure. Patients with a previous thromboembolic event, known prothrombotic condition, systemic symptomatic medical disease, septic arthritis, or with third party compensation were not eligible. Eligible patients did not receive pharmacologic or mechanical thromboembolic prophylaxis and were encouraged to mobilize post-operatively depending on their specific procedure. At 2-weeks post-op patients were assessed for signs and symptoms of DVT and PE, including calf erythema and swelling, calf pain, shortness of breath and pleuritic chest pain. A bilateral Duplex color Ultrasonography with assessment of compressibility of the proximal deep venous system was performed between 10-21 days on all patients.

The primary outcome was the frequency of DVT, as diagnosed by Doppler. The following risk factors were compared between patients: Demographic information, family history of DVT or blood dyscrasia, smoking status, surgical details i.e. traction time, patient positioning, specific surgical procedures (peripheral compartment arthroscopy, bony surgery, microfracture, labral repair, etc.).

RESULTS

Five patients (mean age: 43.8; range 27-58) were diagnosed with a DVT (2 males / 3 females) between 2-22 days post-operatively. Four patients were symptomatic. Three patients were diagnosed because of symptoms requiring an emergency assessment and evaluation confirming a DVT. One patient was suspected to have a DVT at their first post-

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op visit and then confirmed by Ultrasound. The asymptomatic patient was without signs of a DVT on clinical examination. Four patients had a DVT restricted to the calf veins and one patient had involvement of the popliteal vein. No patients had proximal extension into the thigh or pelvis. The arthroscopy for these 5 patients was performed in the supine position.

The average age of the 110 patients (53 males/57 females) without a DVT was 34.5 (range 18-58). The average traction time was 38 and 61 minutes for those patients with and without a DVT, respectively. All other potential risk factors including surgical procedure, post-op weight bearing status, mobilization and use of NSAIDs were similar.

DISCUSSION

The overall incidence of DVT in this prospective study was less than 5%. This would suggest that routine screening with Doppler Ultrasound is not necessary. There were no proximal DVTs detected and no cases resulting in a pulmonary embolism. The significance of calf DVT and whether or not treatment is needed for symptomatic patients remains to be fully elucidated.

CONCLUSIONS

The incidence of DVT following elective hip arthroscopy is low. Routine screening for DVT is not recommended. Mechanical or pharmacologic DVT prophylaxis for patients without known DVT risk factors is also not recommended.