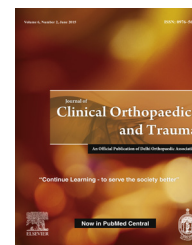


Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

ScienceDirect

journal homepage: [www.elsevier.com/locate/jcot](http://www.elsevier.com/locate/jcot)

## Original Article

# Is it necessary to use chemoprophylaxis in Indian patients after hip surgery?



Chandra Prakash Pal (M.S. Ortho)<sup>a,\*</sup>, Amrit Goyal (M.S. Ortho)<sup>b</sup>,  
 Deepak Kumar (M.S. Ortho)<sup>b</sup>, Rajendra Kumar Shakunt (M.S. Ortho)<sup>b</sup>,  
 Karuna Shankar Dinkar (M.S. Ortho)<sup>b</sup>, Suneel Kumar (M.S. Ortho)<sup>c</sup>

<sup>a</sup> Assistant Professor and Head, Department of Orthopaedics, S.N. Medical College, Agra, Uttar Pradesh, India

<sup>b</sup> Lecturer, S.N. Medical College, Agra, Uttar Pradesh, India

<sup>c</sup> Senior Resident, S.N. Medical College, Agra, Uttar Pradesh, India

## ARTICLE INFO

## Article history:

Received 9 April 2015

Accepted 24 June 2015

Available online 26 September 2015

## Keywords:

Incidence

Deep vein thrombosis

Indian patients

Colour Doppler ultrasonography

Chemoprophylaxis

## ABSTRACT

**Aim:** To know the incidence of postoperative deep vein thrombosis after hip surgery in Indian patients.

**Method:** Our study comprises 108 patients undergoing major lower limb orthopaedic surgery. Evaluation by colour Doppler ultrasonography to detect DVT was performed on both lower limbs between seventh and 14th postoperative day. There were 15 total hip replacements (THR), 50 bipolar hemiarthroplasties and 43 proximal femoral fixations by intra-/extra-medullary implant. Only 17 (15.74%) patients showed Colour Doppler evidence of DVT without any complication.

**Results:** In THR patients, incidence of DVT is 20%; in bipolar hemiarthroplasty, it is 16%; and in the proximal femoral fixation, it is 13.95%. No case developed pulmonary embolism, and the current figure for the incidence of DVT is 15.74%.

**Conclusions:** From our study, it appears to be the difference in incidence of DVT in our country and in western countries, but incidence is not rare. Hence, chemoprophylaxis is necessary in Indian patients.

© 2015 Delhi Orthopedic Association. Published by Elsevier B.V. All rights reserved.

## 1. Introduction

The venous thromboembolism (VTE) causes significant morbidity and mortality in orthopaedic surgery. It is a potentially fatal and preventable condition.<sup>1</sup> It comprises deep vein thrombosis (DVT) and pulmonary embolism (PE). In orthopaedic

surgeries, several risk factors are present, such as obesity, immobilization, advanced age, fractures, spinal cord injuries, etc. DVT commonly affects the calf veins, popliteal vein, femoral vein and deep veins of the pelvis. DVT in lower limb can be classified on the basis of site of thrombosis as (1) proximal, when popliteal vein is involved (2) distal, when the calf veins are involved. Risk of PE is more common in proximal DVT than

\* Corresponding author. Tel.: +91 9634031500.

E-mail address: [drcportho@gmail.com](mailto:drcportho@gmail.com) (C.P. Pal).

<http://dx.doi.org/10.1016/j.jcot.2015.06.001>

0976-5662/© 2015 Delhi Orthopedic Association. Published by Elsevier B.V. All rights reserved.

distal DVT.<sup>1,2</sup> History and clinical examination are not reliable for diagnosing DVT in the lower limb. It can be symptomatic or asymptomatic. Symptomatic patients present with lower limb pain and tenderness in calf, swelling in calf and thigh, discolouration of limb, prominence of the veins, fever and positive Homan's sign.<sup>3,4</sup> Majority of the studies have been conducted in western and other Asian countries and have shown that the incidence of DVT is high in major lower limb orthopaedic surgery. In the western population, it varies from 32 to 88% in major lower limb orthopaedic surgery without any thrombo-prophylaxis.<sup>5-7</sup> But in our country, only few studies have been published showing that the incidence of DVT varies from 7.2% to 60% without thrombo-prophylaxis. Nagi et al.,<sup>8</sup> Sharma et al.,<sup>9</sup> Bhan et al.,<sup>10</sup> Maini et al.,<sup>11</sup> Mavalankar et al.<sup>12</sup> and Agarwala et al.<sup>13</sup> reported incidences of DVT as 8%, 19.6%, 23.3%, 9.9%, 7.2% and 60%, respectively, Hence, we have taken this study to estimate the incidence of DVT in Indian patients undergoing major lower limb orthopaedic surgeries around the hip joint.

## 2. Materials and methods

This prospective study was carried out in the Department of Orthopaedics S.N. Medical College, Agra.

**Selection of patients:** All consecutive patients were selected from the patients attending the outpatient department and the emergency department between March 2012 and October 2013 for undergoing elective hip surgeries, such as total hip replacement (THR), Bipolar hemiarthroplasty and proximal femoral fracture fixation. A prior consent was obtained from all the patients and the study were approved by the Ethical Committee of the Hospital. The patients were selected on the basis of strict inclusion and exclusion criteria.

### *Inclusion criteria:*

1. Indian patients of both sexes, 18 years or older.
2. Patients were posted for elective hip surgeries, such as unilateral THR, DHS/DCS and Bipolar hemiarthroplasty.
3. Pre-operative no clinical signs of DVT/Colour Doppler negative for DVT.

### *Exclusion criteria:*

1. Previous history of DVT:
  - Ipsilateral
  - Ipsilateral in the past 2 years
  - Two or more episodes, in either extremity
  - Any reports of VTE in the past 2 years
2. Patient on anticoagulation therapy
3. Patient with high risk factors; advisable to take anticoagulant therapy for thrombosis
4. Bleeding disorders

Clinical signs of DVT and colour Doppler sonography results were recorded. All patients were examined daily for

- Positive Homan's sign
- Pain and tenderness in calf
- Prominence of superficial veins

- Swelling in thigh, leg and ankle
- Skin discolouration
- Fever

(A positive Homan's sign – calf pain at dorsiflexion on the foot).

In all selected patients, Colour Doppler sonography was performed by an experienced radiologist using 5–12 MHz linear transducer and 3–5 MHz convex probe that was used in obese patients. Both the surgical and contra-lateral lower limbs were scanned between seventh and 14th day. A standard procedure was used that included evaluation of the following venous segments in all patients: external iliac (distal part), common femoral, superficial femoral, popliteal, posterior tibial and peroneal veins. The proximal veins were examined with the patient in the supine position, and the popliteal and calf veins were examined with the patient in the sitting position with the leg hanging down if feasible. Some established cases of DVT required treatment and started with low molecular weight heparin (Enoxaparin) 1 mg/kg subcutaneously twice daily and simultaneously warfarin tablet 5 mg once daily. Enoxaparin 1 mg/kg is given for 7 days and stopped, and oral warfarin 5 mg once daily continued for three months.

## 3. Results

In our study, a total of 108 patients were included, of which 62 were males and 46 were females. The average age was 54.48 years. Thirteen patients were with avascular necrosis of the femoral head with secondary arthritis, 52 patients were having neck of femur fracture and 33 patients were having intertrochanteric/subtrochanteric fracture of femur. Among these, the maximum number of patients was with fracture neck of femur at 48.15%. Fracture neck of femur was more common in female at 30.56% and intertrochanteric/subtrochanteric fracture more common in male in 30.56% patients. Avascular necrosis was more common in males (9.26%). Out of 108 patients, only 17 (15.74%) patients developed DVT. In which, 7 (6.48%) patients has proximal DVT, 10 (9.26%) patients has distal DVT and only one patient developed DVT in contra-lateral lower limb. There was no case that developed PE. DVT is more common in THR (20%) than bipolar hemiarthroplasty (16%) and proximal femoral fracture fixation (13.95%). All DVT positive patients were in the age group of 24–72 years with 56.06 years as the average age. The incidence is more common in females (17.39%) than in males (14.52%). In all DVT positive patients, swelling of the calf and thigh was present in 70.58% cases, while pain and tenderness in calf, positive Homan's sign, discolouration of limb, prominence of the veins and fever were present in 47.06%, 35.88%, 11.76%, 17.65% and 29.41%, respectively. Swelling of calf and thigh was 39.56%; pain and tenderness in calf, positive Homan's sign, discolouration of limb, prominence of veins and fever were 10.99%, 2.20%, 0%, 0% and 9.89% of cases without DVT, respectively. One clinical feature was present in 17.65%, two in 17.65%, three in 11.77%, four in 5.88%, five in 5.88% and six in 11.77% of patients who had DVT. In 29.41% patients, they did not show any sign and symptom of DVT. In the group that did not have DVT, 27.41%, 6.59%, 4.40% and 2.2% cases were with one, two, three and four

Download English Version:

<https://daneshyari.com/en/article/3245186>

Download Persian Version:

<https://daneshyari.com/article/3245186>

[Daneshyari.com](https://daneshyari.com)