CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE

CONTROVERSIES & UPDATES IN VASCULAR SURGERY

JANUARY 25-27 2018

MARRIOTT RIVE GAUCHE & CONFERENCE CENTER, PARIS, FRANCE

Do we need thrombophilia screening in the presence of DVT - Con

Manj Gohel

Cambridge University Hospitals &

Imperial College London

Disclosure

Speaker name:

Mr Manj Gohel MD FRCS FEBVS

✓ I have the following potential conflicts of interest to report:

✓ Consulting: Medtronic, Cook Medical

☐ Employment in industry

☐ Shareholder in a healthcare company

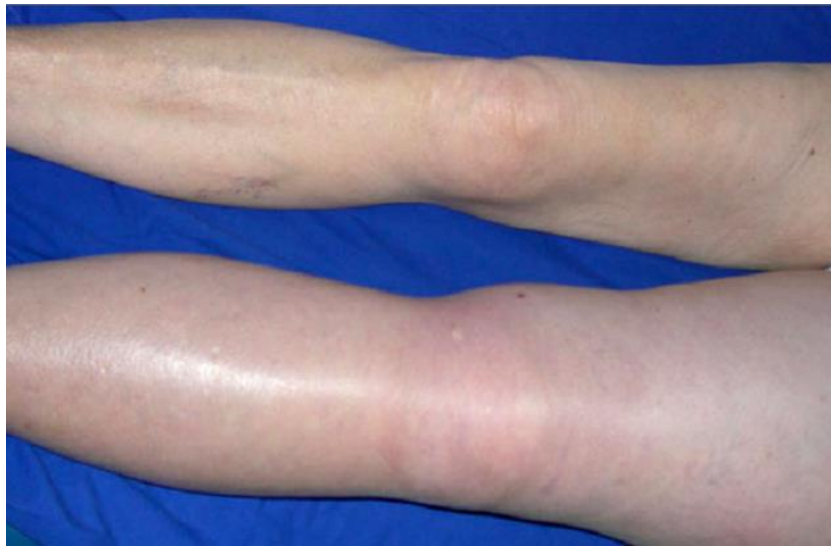
☐ Owner of a healthcare company

✓ Other

✓ Research Grant: Laboratoires Urgo

✓ Travel support: Gore, Endologix

Introduction - DVT



24 year old female

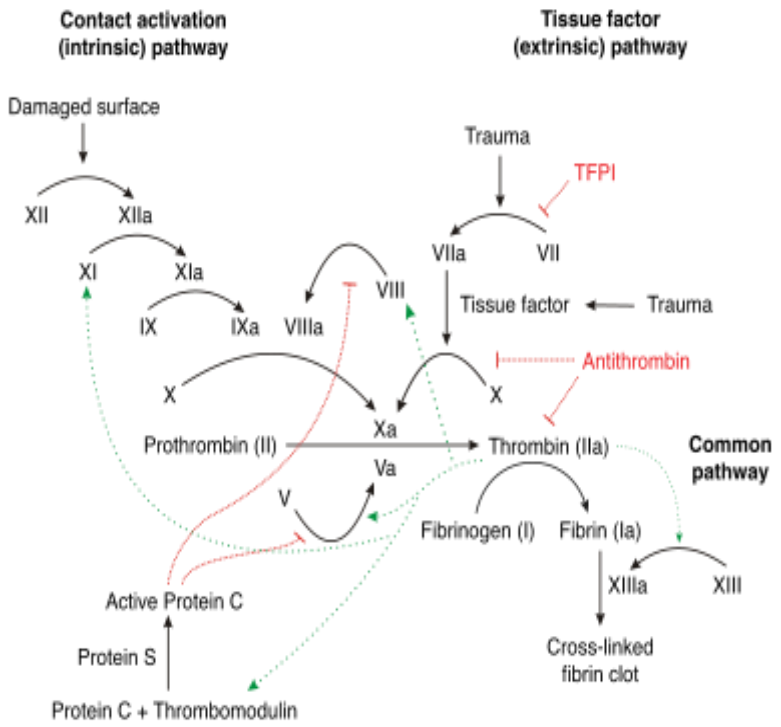
3 days of left leg swelling and pain

Started on COCP 2 months ago

- Common (0.5-1/1000 adults / year)
- Disabling condition
- Expensive
- Serious complications – PE, PTS

Thrombophilias

Hereditary or acquired conditions that predispose to thrombosis



Genetic factors

Factor V Leiden mutation

Protein C / S deficiency

Antithrombin III deficiency

Prothrombin gene mutation

Acquired factors

Antiphospholipid syndrome
Malignancy
Obesity
Hormone treatment
Comorbidity
Surgery
Pregnancy
Trauma
Immobility
Long haul travel

Why perform a thrombophilia screen?

TO REDUCE THE RISK OF RECURRENT VENOUS THROMBOEMBOLISM

It may influence the duration of anticoagulation therapy

The patient should be fully informed about their disease process

If there is a thrombophilia, it may be important for other relatives

If there is a thrombophilia, patients may change their behaviour

Classification of DVT

PROVOKED
Transient clinical risk factor in 3 months before DVT

Surgery, long-haul travel, pregnancy, oral contraception / HRT / tamoxifen, trauma, malignancy

UNPROVOKED
No obvious clinical risk factor

Antithrombotic Therapy for VTE Disease

CHEST Guideline and Expert Panel Report

5. In patients with a proximal DVT of the leg or PE provoked by surgery, we recommend treatment with anticoagulation for 3 months over (i) treatment of a shorter period (Grade 1B)**, (ii) treatment of a longer time-limited period (eg, 6, 12, or 24 months)** (Grade 1B)**, or (iii) extended therapy (no scheduled stop date)** (Grade 1B)**.**

9. In patients with a first VTE that is an unprovoked proximal DVT of the leg or PE and who have a (i) low or moderate bleeding risk (see text), we suggest extended anticoagulant therapy (no scheduled stop date) over 3 months of therapy (Grade 2B)**, and (ii) high bleeding risk (see text), we recommend 3 months of anticoagulant therapy over extended therapy (no scheduled stop date)** (Grade 1B).

CHEST 2016; 149(2):315-352

CHEST

Provoked DVT

REVIEW ARTICLE

Risk of Recurrence After a First Episode of Symptomatic Venous Thromboembolism Provoked by a Transient Risk Factor

A Systematic Review

Alfonso Iorio, MD; Clive Kearon, MD; Esmeralda Filippucci, MD; Maura Marcucci, MD; Ana Macura, MD; Vittorio Pengo, MD; Sergio Siragusa, MD; Gualtiero Palareti, MD

Background: We aimed to determine the risk of recurrence for symptomatic venous thromboembolism (VTE) provoked by different transient risk factors.

Data Sources: MEDLINE, EMBASE, and Cochrane Collaboration Registry of Randomized Trials databases were searched.

Study Selection: Prospective cohort studies and randomized trials of patients with a first episode of symptomatic VTE provoked by a transient risk factor and treated for at least 3 months were identified.

Data Extraction: Number of patients and recurrent VTE during the 0- to 12-month and 0- to 24-month intervals after stopping therapy, study design, and provoking risk factor characteristics were extracted.

Data Synthesis: Annualized recurrence rates were calculated and pooled across studies. At 24 months, the rate of recurrence was 3.3% per patient-year (11 studies, 2268 patients) for all patients with a transient risk factor, 0.7% per patient-year (3 studies, 248 patients) in the subgroup with a surgical factor, and 4.2% per patient-year (3 studies, 509 patients) in the subgroup with a nonsurgical factor. In the same studies, the rate of recurrence after unprovoked VTE was 7.4% per patient-year. The rate ratio for a nonsurgical compared with a surgical factor was 3.0 and for unprovoked thrombosis compared with a nonsurgical factor was 1.8 at 24 months.

Conclusions: The risk of recurrence is low if VTE is provoked by surgery, intermediate if provoked by a nonsurgical risk factor, and high if unprovoked. These risks affect whether patients with VTE should undergo short-term vs indefinite treatment.

Arch Intern Med. 2010;170(19):1710-1716

Recurrent DVT risk after stopping oral anticoagulation is LOW

0.7% / year (surgical factor)

Provoked DVT

Journal of Thrombosis and Haemostasis, **6**: 1474–1477 DOI: 10.1111/j.1538-7836.2008.03055.x

ORIGINAL ARTICLE

Testing for inherited thrombophilia does not reduce the recurrence of venous thrombosis

M. COPPENS,* J. H. REIJNDERS,* S. MIDDELDORP,†‡ C. J. M. DOGGEN† and F. R. ROSENDAAL†§
**Department of Vascular Medicine, Academic Medical Centre, Amsterdam; †Department of Epidemiology, ‡Department of General Internal Medicine, §Department of Thrombosis and Haemostasis, Leiden University Medical Centre, Leiden, the Netherlands.*

Provoked DVT

Thrombophilia, Clinical Factors, and Recurrent Venous Thrombotic Events

Sverre C. Christiansen, MD
Suzanne C. Cannegieter, MD, PhD
Ted Koster, MD, PhD
Jan P. Vandenbroucke, MD, PhD
Frits R. Rosendaal, MD, PhD

Context Data on the recurrence rate of venous thrombotic events and the effect of several risk factors, including thrombophilia, remain controversial. The potential benefit of screening for thrombophilia with respect to prophylactic strategies and duration of anticoagulant treatment is not yet known.

Objectives To estimate the recurrence rate of thrombotic events in patients after a first thrombotic event and its determinants, including thrombophilic abnormalities.

Design, Setting, and Patients Prospective follow-up study of 474 consecutive patients aged 18 to 70 years without a known malignancy treated for a first objectively confirmed thrombotic event at anticoagulation clinics in the Netherlands. The Leiden Thrombophilia Study (LETS) was conducted from 1988 through 1992 and patients were followed up through 2000.

Main Outcome Measures Recurrent thrombotic event based on thrombophilic risk factors, sex, type of initial thrombotic event (idiopathic or provoked), oral contraceptive use, elevated levels of factors VIII, IX, XI, fibrinogen, homocysteine, and anticoagulant deficiencies.

Results A total of 474 patients were followed up for mean (SD) of 7.3 (2.7) years and complete follow-up was achieved in 447 (94%). Recurrence of thrombotic events occurred in 90 patients during a total of 3477 patient-years. The rate of thrombotic event recurrence was 25.9 per 1000 patient-years (95% confidence interval [CI], 20.8-31.8 per 1000 patient-years). The incidence rate of recurrence was highest during the first 2 years (31.9 per 1000 patient-years; 95% CI, 20.3-43.5 per 1000 patient-years). The risk of thrombotic event recurrence was 2.7 times (95% CI, 1.8-4.2 times) higher in men than in women. Patients whose initial thrombotic event was idiopathic had a higher risk of a thrombotic event recurrence than patients whose initial event was provoked (hazard ratio [HR], 1.9; 95% CI, 1.2-2.9). Women who used oral contraceptives during follow-up had a higher thrombotic event recurrence rate (28.0 per 1000 patient-years; 95% CI, 15.9-49.4 per 1000 patient-years) than those who did not (12.9 per 1000 patient-years; 95% CI, 7.9-21.2 per 1000 patient-years). Recurrence risks of a thrombotic event by laboratory abnormality ranged from an HR of 0.6 (95% CI, 0.3-1.1) in patients with elevated levels of factor XI to an HR of 1.8 (95% CI, 0.9-3.7) for patients with anticoagulant deficiencies.

Conclusions Prothrombotic abnormalities do not appear to play an important role in the risk of a recurrent thrombotic event. Testing for prothrombotic defects has little consequence with respect to prophylactic strategies. Clinical factors are probably more important than laboratory abnormalities in determining the duration of anticoagulation therapy.

JAMA. 2005;293:2352-2361 www.jama.com

Low recurrent DVT rate in patients with provoked DVT

No increase in risk in patients with thrombophilias

Unprovoked DVT

Haematologica 2007; 92:199-205

Original Article

The risk of recurrent venous thromboembolism after discontinuing anticoagulation in patients with acute proximal deep vein thrombosis or pulmonary embolism. A prospective cohort study in 1,626 patients

Paolo Prandoni, Franco Noventa, Angelo Ghirarduzzi, Vittorio Pengo, Enrico Bernardi, Raffaele Pesavento, Matteo Iotti, Daniela Tormene, Paolo Simioni, Antonio Pagnan

High rate of recurrent DVT after stopping anticoagulation:

40% at 5 years, 50% at 10 years

J Thromb Thrombolysis (2016) 41:154–164
DOI 10.1007/s11239-015-1316-1

CrossMark

Guidance for the evaluation and treatment of hereditary and acquired thrombophilia

Scott M. Stevens[1,2] · Scott C. Woller[1,2] · Kenneth A. Bauer[3] · Raj Kasthuri[4] · Mary Cushman[5] · Michael Streiff[6] · Wendy Lim[7] · James D. Douketis[7]

"We recommend that thrombophilia screening not be performed in most situations"

The NEW ENGLAND JOURNAL of MEDICINE

REVIEW ARTICLE

N ENGL J MED 377;12 NEJM.ORG SEPTEMBER 21, 2017

Thrombophilia Testing and Venous Thrombosis

Jean M. Connors, M.D.

" Data showing the clinical usefulness and benefits of thrombophilia testing are limited or non-existent"

Journal of HOSPITAL MEDICINE www.journalofhospitalmedicine.com

CHOOSING WISELY©: THINGS WE DO FOR NO REASON

Inpatient Inherited Thrombophilia Testing

Christopher M. Petrilli, MD[1*†], Lauren Heidemann, MD[1†], Megan Mack, MD[1,2], Paul Durance, PhD[3], Vineet Chopra, MD, MSc[1,2]

[1]Department of Medicine, Division of General Internal Medicine, University of Michigan, Ann Arbor, Michigan; [2]VA Ann Arbor Healthcare System, Ann Arbor, Michigan; [3]Department of Quality Improvement Operations, University of Michigan, Ann Arbor, Michigan.

Cost of thrombophilia screening

$300-672million / year

Journal of Hospital Medicine Vol 11 | No 11 | November 2016

Conclusion

We DO NOT need thrombophilia screening after DVT because:

After PROVOKED DVT, a positive thrombophilia screen is not justification to prolong anticoagulation

After UNPROVOKED DVT, a negative thrombophilia screen is not justification to stop anticoagulation