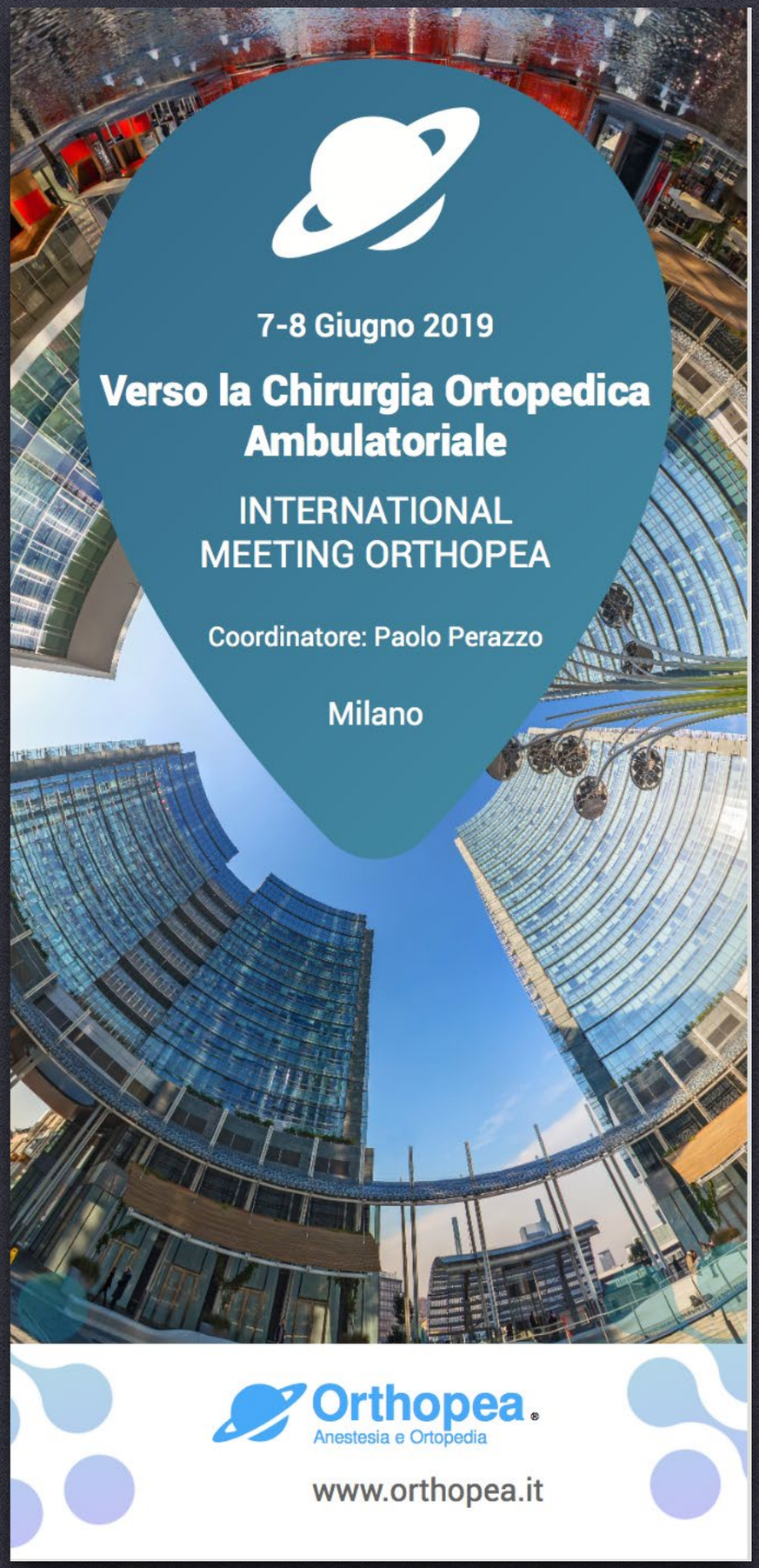


LA TROMBOPROFILASSI IN CHIRURGIA ORTOPEDICA AMBULATORIALE O A DEGENZA BREVE

Claudio Roscitano
Humanita Gavazzeni
Bergamo

HUMANITAS GAVAZZENI

NICE National Institute for Health and Care Excellence

Venous thromboembolism in over 16s: reducing the risk of hospital-acquired deep vein thrombosis or pulmonary embolism

NICE guideline [NG89] Published date: March 2018 Uptake of this guidance

CHEST Supplement

ANTITHROMBOTIC THERAPY AND PREVENTION OF THROMBOSIS, 9TH ED: ACCP GUIDELINES

Prevention of VTE in Orthopedic Surgery Patients

Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines

Yngve Falck-Ytter, MD; Charles W. Fran
Catherine Curley, MD; Ola E. Dahl, MD
Thomas L. Ortel, MD, PhD; Stephen G.

AAOS

American Academy of Orthopaedic Surgeons

PREVENTING VENOUS THROMBOEMBOLIC DISEASE IN PATIENTS UNDERGOING ELECTIVE HIP AND KNEE ARTHROPLASTY

EVIDENCE-BASED GUIDELINE AND EVIDENCE REPORT

NICE National Institute for Health and Care Excellence

NICE guideline [NG89] Published date: March 2018 Uptake of this guidance

For THA they recommends

- LMWH for 10 days followed by aspirin for 28 days
- LMWH for 28 days
- Rivaroxaban for 5 weeks

For TkA they recommends

- Aspirin
- LMWH + IPCD → for 14 days
- Rivaroxaban

CHEST / 141 / 2 / FEBRUARY, 2012 SUPPLEMENT

CHEST Supplement

ANTITHROMBOTIC THERAPY AND PREVENTION OF THROMBOSIS, 9TH ED: ACCP GUIDELINES

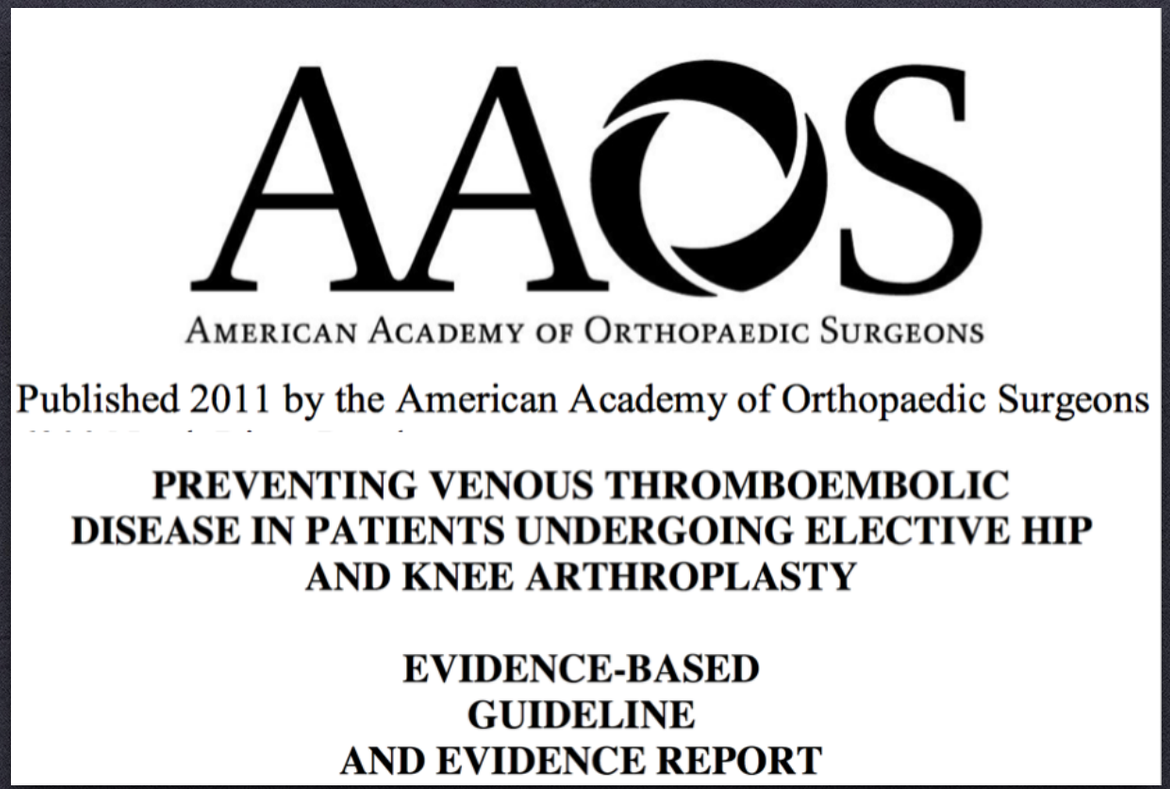
Prevention of VTE in Orthopedic Surgery Patients

Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines

Yngve Falck-Ytter, MD; Charles W. Francis, MD; Norman A. Johanson, MD; Catherine Curley, MD; Ola E. Dahl, MD; Sam Schulman, MD, PhD; Thomas L. Ortel, MD, PhD; Stephen G. Pauker, MD; and Clifford W. Colwell Jr, MD

They recommend:

- 10-14 days of LMWH (first chose)
- direct oral anticoagulants for 35 days
- Aspirin for 35 days



They suggest the use of pharmacological and/or mechanical prophylaxis but leaving the choice:

- of agent or device
- the duration of treatment

EJA

Eur J Anaesthesiol 2017; **34:**1–5

GUIDELINES

European guidelines on perioperative venous thromboembolism prophylaxis

Day surgery and fast-track surgery

Linas Venclauskas, Juan V. Llau, Jean-Yves Jenny, Per Kjaersgaard-Andersen and Øivind Jans, for the ESA VTE Guidelines Task Force

additional risk factors, we recommend general measures of thromboprophylaxis (Grade 1B) and we suggest the administration of pharmacological prophylaxis with low molecular weight heparins (Grade 2B). For patients undergoing a high-risk procedure with additional risk factors we recommend general measures of thromboprophylaxis (Grade 1B) and pharmacological prophylaxis with low molecular weight heparins over other drugs (Grade 1B), or suggest specific mechanical measures in case of increased bleeding risk (Grade 2C). Pharmacological prophylaxis should last a minimum of 7 days (Grade 1B), although in selected cases of fast-track surgery, thromboprophylaxis could be limited to hospitalisation only (Grade 2C) and in specific cases of high-risk procedures, thromboprophylaxis could be extended for up to 4 weeks (Grade 2B).

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Acta Orthopaedica 2010; 81 (5): 599–605

Low risk of thromboembolic complications after fast-track hip and knee arthroplasty

Henrik Husted[1,4], Kristian Stahl Otte[1,4], Billy B Kristensen[2,4], Thue Ørsnes[1,4], Christian Wong[1,4], and Henrik Kehlet[3,4]

Departments of [1]Orthopedic Surgery and [2]Anesthesiology, Hvidovre University Hospital; [3]Section of Surgical Pathophysiology, Rigshospitalet, Copenhagen University; [4]the Lundbeck Centre for Fast-track Hip and Knee Arthroplasty, Copenhagen, Denmark
Correspondence: henrikhusted@dadlnet.dk
Submitted 10-02-25. Accepted 10-06-08

A recent cohort study on fast track THA-TKA questioned the need for prolonged thromboprophylaxis when LOS was < 5days

Current recommendations are based on randomized studies with long LOS and without consideration of use of fast track protocols and early mobilization

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Correspondence: henrikhusted@dadlnet.dk
Submitted 10-02-25. Accepted 10-06-08

Confirming the safety of in-hospital only thromboprophilaxis in fast track THA-TKA patients whit a LOS < 5 days

Pre-operative risk factors for VTE were not significantly related to VTE

The mean LOS decreased from 7,3 days in 2004 to 3,1 days in 2008

Table 1. Distribution of operations and length of stay (LOS)

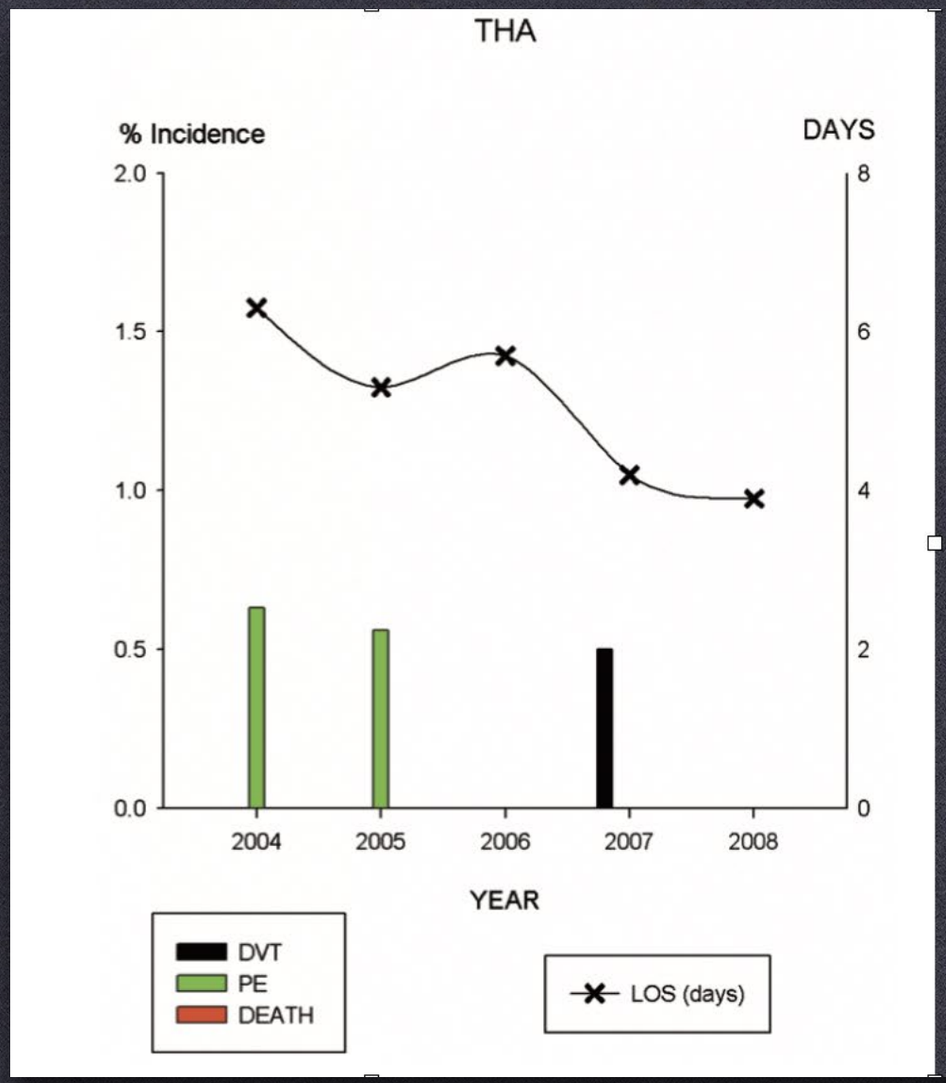
	No. of operations				Length of stay		
	All	TKA	BSTKA	THA	TKA	BSTKA	THA
2004	311	124	28	159	4.4	5.9	6.3
2005	378	167	32	179	4.6	6.0	5.3
2006	434	159	58	217	4.5	7.3	5.7
2007	433	182	52	199	3.1	4.2	4.2
2008	421	152	76	193	3.2	4.2	3.9
Total	1,977	784	246	947			

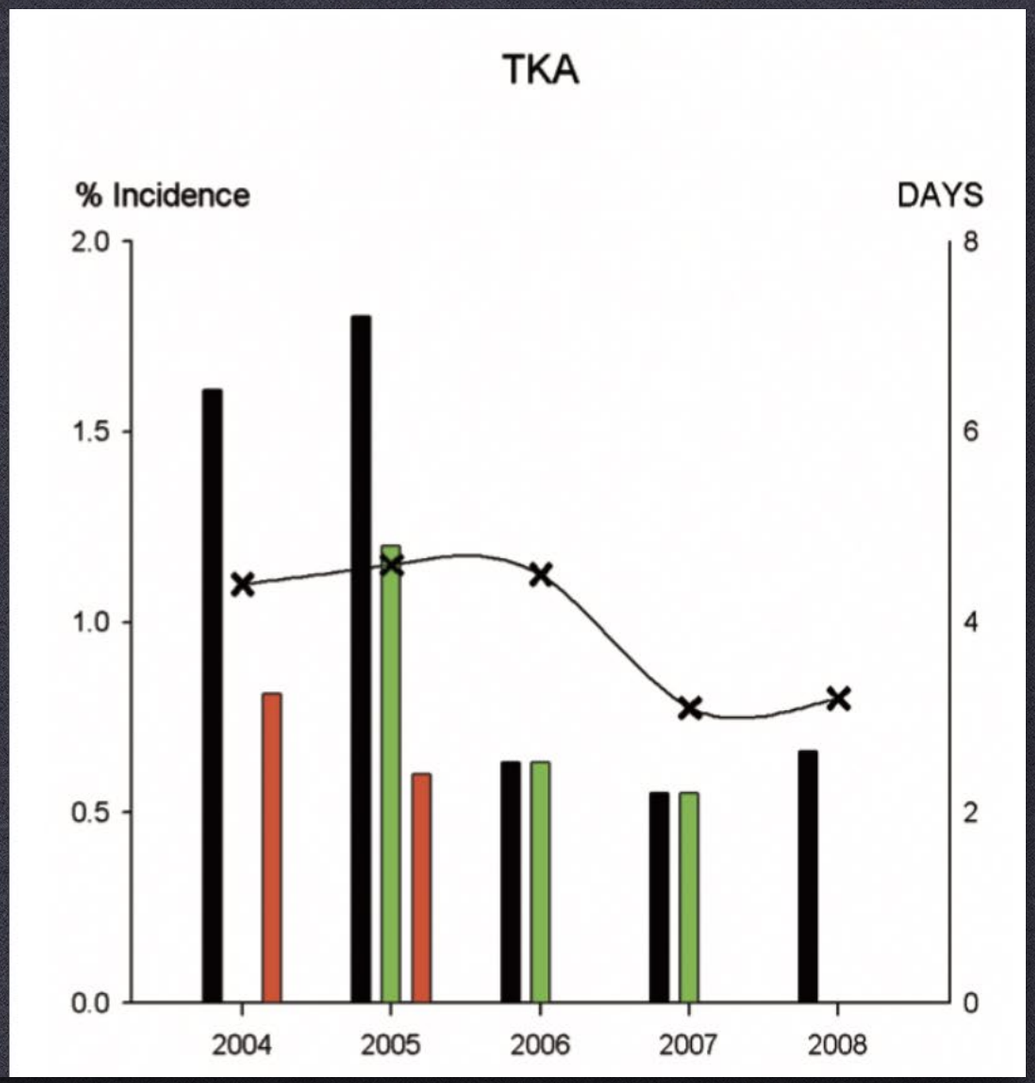
Which Early mobilization, LOS was reduced, and the duration of DVT prophylaxis was shorted

Table 2. Numbers and incidences (with 95% CI) of deep venous thrombosis (DVT), pulmonary embolism (PE), and death (D) within 90 days

	Number of			Incidences (CI)		
	DVT	PE	D	DVT	PE	D
TKA						
2004	2	0	1	1.61 (0.4–5.7)	0 (0–3.0)	0.81 (0.1–4.4)
2005	4	2	1	2.40 (0.9–6.0)	1.20 (0.3–4.3)	0.60 (0.1–3.3)
2006	1	1	0	0.63 (0.1–3.5)	0.63 (0.1–3.5)	0 (0–2.4)
2007	1	1	0	0.55 (0.1–3.1)	0.55 (0.1–3.1)	0 (0–2.1)
2008	1	0	0	0.66 (0.1–3.6)	0 (0–2.5)	0 (0–2.5)
Total				1.15 (0.6–2.2)	0.51 (0.2–1.3)	0.26 (0.1–1.0)
BSTKA						
2004	0	0	0	0 (0–12.1)	0 (0–12.1)	0 (0–12.1)
2005	0	0	0	0 (0–10.7)	0 (0–10.7)	0 (0–10.7)
2006	0	0	0	0 (0–6.2)	0 (0–6.2)	0 (0–6.2)
2007	0	0	0	0 (0–6.9)	0 (0–6.9)	0 (0–6.9)
2008	0	0	0	0 (0–4.8)	0 (0–4.8)	0 (0–4.8)
Total				0 (0–1.5)	0 (0–1.5)	0 (0–1.5)
THA						
2004	0	1	1	0 (0–2.4)	0.63 (0.1–3.5)	0.63 (0.1–3.5)
2005	0	1	0	0 (0–2.1)	0.56 (0.1–3.1)	0 (0–2.1)
2006	0	0	0	0 (0–1.7)	0 (0–1.7)	0 (0–1.7)
2007	1	0	0	0.50 (0.1–2.8)	0 (0–1.9)	0 (0–1.9)
2008	1	0	0	0.52 (0.1–2.9)	0 (0.1–2.0)	0 (0.1–2.0)
Total				0.21 (0.1–0.8)	0.21 (0.1–0.8)	0.11 (0–0.6)

Number of incident cases of DVT, PE and death for each year with corresponding mean LOS





Early mobilization reduce the risk o DVT and therethy the need for prolonged prophylaxis

Open Access Research

BMJ Open

Thromboprophylaxis only during hospitalisation in fast-track hip and knee arthroplasty, a prospective cohort study

Christoffer C Jørgensen,[1] Michael K Jacobsen,[2] Kjeld Soeballe,[2] Torben B Hansen,[3] Henrik Husted,[4] Per Kjærsgaard-Andersen,[5] Lars T Hansen,[6] Mogens B Laursen,[7] Henrik Kehlet[1]

ABSTRACT

Objectives: Intern
thrombosis prophyla
and total knee arthro
However, previous s
(length of stay; LOS)
early mobilisation, w
thromboembolic eve
incidence of any symptomatic thromboembolic events (TEEs) with only in-hospital prophylaxis if LOS ≤5 days after fast-track THA and TKA.

Conclusions: The low incidence of TEE and VTE suggests that in-hospital prophylaxis only, is safe in fast-track THA and TKA patients with LOS of ≤5 days. Guidelines on thromboprophylaxis may need reconsideration in fast-track elective surgery.

RADS

THE DANISH COUNCIL FOR THE USE OF EXPENSIVE HOSPITAL MEDICINES

Modified their recommendations for the use of thromboprophylaxis in mayor joint arthroplasty to allow in-hospital only prophylaxis in the fast-track procedures with a LOS of 5 days

Thromboprophylaxis after discharge may not be necessary in fast track THA-TKA with LOS < 5 DAYS

Safety of In-Hospital Only Thromboprophylaxis after Fast-Track Total Hip and Knee Arthroplasty: A Prospective Follow-Up Study in 17,582 Procedures

Pelle Baggesgaard Petersen[1] Henrik Kehlet[1,2] Christoffer Calov Jørgensen[1,2] on behalf of the Lundbeck Foundation Centre for Fast-track Hip and Knee Replacement Collaborative Group*

The incidence of VTE in fast track THA-TKA remained low 0,40% in patient with LOS < 5 days and in-hospital only thromboprophylaxis

Enhanced recovery protocols based on multiple evidence-based care including:

- Spinal anaesthesia
- opioid-sparing analgesia
- Early mobilization

- 3 different kinds of boards
- RCT from 1990-2010 remain relevant in a modern clinical setting ?

THE LANCET

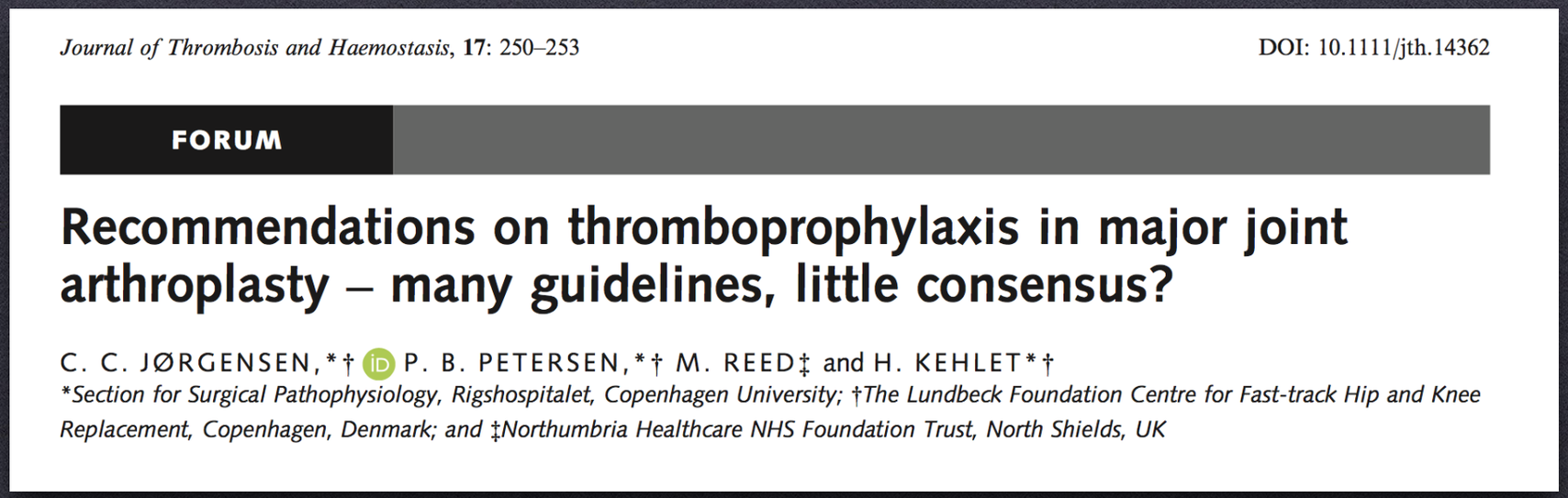
COMMENT | VOLUME 381, ISSUE 9878, P1600-1602, MAY 11, 2013

Fast-track hip and knee arthroplasty

Henrik Kehlet

Published: May 11, 2013 • DOI: https://doi.org/10.1016/S0140-6736(13)61003-X

- Most of RCT had a median length of LOS of 8-12 days, surgical and anesthetic techniques outdated ,no focus on early mobilization



Journal of Thrombosis and Haemostasis, **17**: 250–253 DOI: 10.1111/jth.14362

FORUM

Recommendations on thromboprophylaxis in major joint arthroplasty – many guidelines, little consensus?

C. C. JØRGENSEN,*† P. B. PETERSEN,*† M. REED‡ and H. KEHLET*†

**Section for Surgical Pathophysiology, Rigshospitalet, Copenhagen University; †The Lundbeck Foundation Centre for Fast-track Hip and Knee Replacement, Copenhagen, Denmark; and ‡Northumbria Healthcare NHS Foundation Trust, North Shields, UK*

strengths [13], there is an increasing argument for looking beyond rigid study design and critically focusing on present clinical relevance in order to avoid repeating the conclusions of older RCTs performed prior to current optimized perioperative care [20].

The London School of Economics and Political Science

HIERARCHIES OF EVIDENCE IN EVIDENCE-BASED MEDICINE

EJA

Eur J Anaesthesiol 2017; **34:**1–5

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In case of planned neuraxial anesthesia for the procedure, postoperative administration seems to be the preferred option…

What is the starting time ?????

TAKE HOME MESSAGE

A recent cohort study on fast track THA-TKA questioned the need for prolonged thromboprophylaxis when LOS was < 5days

The incidence of VTE in fast track THA-TKA remained low 0,40% in patient with LOS < 5 days and in-hospital only thromboprophylaxis

Thromboprophylaxis after discharge may not be necessary in fast track THA-TKA with LOS <5 DAYS

Current recommendations are based on randomized studies with long LOS and without consideration of use of fast track protocols and early mobilization

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