



PREVENTION OF PHLEBITIS FOR INFERIOR LIMB'S INJURED PATIENTS



Thesis of Lucile Filiâtre and Fanny Puech (24th April 2012)
Presented by Aurélie Janczewski and Dominique Lamy

Thanks to :

Vincent Diebolt and Simon Varin for the procedure
« Médecins de Montagne, MdeM » for the support and involvement
Centre d'Investigation Clinique INSERM 003 (CHU of Grenoble) for its collaboration
Léo Pharma for the financing.

EURIPA MARSEILLE 23 & 24 Septembre 2016

In the French ski resorts (2012),

- 42 000 inferior limb's injured people / winter
- No product's licence for LMWH, just French medical habit
- No study in primary care
- Algorithm from MdeM

Study M2M Thrombose

- Winter 2010-2011
- 42 investigators
- Primary objective:
 - Incidence of phlebitis and pulmonary embolism (EP) after 3 months
 - Side effects of anticoagulant
- Secondary objectives :
 - Characteristics of included population
 - Risk's factors
 - Assessment of algorithm MdeM

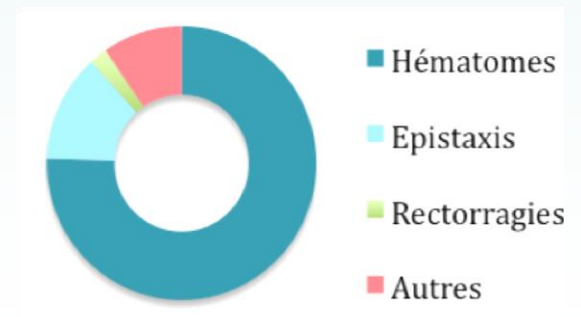


Study M2M Thrombose - Material and methods

- Prospective, multicentre, without intervention, open and no randomized study with cohort
- Inclusion by mountain's GPs
- Interview after 3 months and analysis by CIC

Study M2M Thrombose - Results

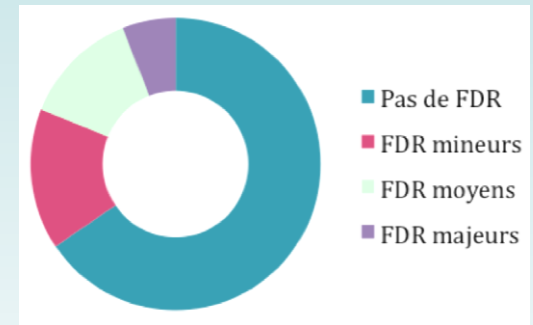
- 1628 included patients, 1498 followed after 3 months
- Primary objective:
 - 17 phlebitis (1,13%), no PE
 - 94 divers bleedings (12,95% from treated patients), just one serious,
 - 24 side effects apart bleedings (3,31%)



Study M2M Thrombose - Results

- Secondary Objectives:

- Included population: young and good health (65,4% without risk's factor - FDR)



- Population with phlebitis: old > 45, cancer's history, oestroprogestative oral contraceptive
- 75,7% of prescriptions complied with algorithm
- 92,3% respected the prescription

Study M2M Thrombose - Results

Crossing real prescriptions vs algorithm's theoretic prescriptions

		REAL PRESCRIPTIONS		
		NO	YES	total
THEORIC PRESCRIPTION	NO	35 ⁽¹⁾ / 445 0.67 % ⁽²⁾	1 / 63 1.59%	508
	YES	1 / 131 0.32 %	12 / 165 1.80 %	976
Total		756	728	1484

⁽¹⁾ phlebitis's number, ⁽²⁾ % of phlebitis

Recommendations in 2012

ACCP, SFAR, AFSSaPS : No systematic LMWH if limb's trauma or leight surgery except rik's factor.

Confrontation with our results

- Very low incidence of phlebitis
- Patients with phlebitis: with risk's factor significant in our study



No risk's factor = No LMWH

New algorithm's elaboration

Adopted risk's factors:

- Age > 45 years old
- Cancer's history
- OP oral contraceptive
- Phlebitis's or PE's history: personal or familial (1st d° + 40 years old)
- Serious Thrombophilia

Walk 4 steps without pain
(after immobilization)

YES

NO

NO
LMWH

Risk's
factor?

YES

NO

LMWH

NO
LMWH

Study M2M Thrombose - Discussion

Implementation with datas

	Real prescriptions of MdeM	Prescription with new algorithm
YES	673 patients 9 phlebitis 1,33%	533 patients 13 phlebitis 2,44%
NON	814 patients 8 phlebitis 0,98%	934 patients 4 phlebitis 0,43%



OPTIMIZED PRESCRIPTION

Study M2M Thrombose - Discussion

Saving's possibility

	Winter 2010-2011 42 000 patients	New algorithm	
% LMWH's prescriptions	45%	36%	
Patient's number	18 900	15120	
Treatment's period	20 days	20 days	10 days
Cost	4,4 M€	3,5 M€	1,7 M€
Saving		0,9 M€	2,7 M€

Study M2M Thrombose - Conclusion

- Low incidence (1,13% of phlebitis)
- Young and good health population (65,4% without risk's factor)
- 16% side effects with LWMH
- New algorithm → fewer prescriptions (36% vs 45%)
- Saving: 1 to 2 M€
- To change prescription's habits
- New study for assesment

THANKS:

- For data's collection and analysis: CIC Grenoble, particularly Pr JL.BOSSON and C.GENTY
 - For elaboration of the study's protocol: Drs S.VARIN and V.DIEBOLT
- For their help, the experts: Pr P.ALBALADEJO, Pr G.PERNOD, Drs P.JOUBERT and B.AUDEMA
 - For the support: « Médecins de Montagne », its 42 investigators and M.COTTAREL-SHÜSSLER
- For the financing: LEO-PHARMA, particularly E.GÜNTHER