JAMA. 2015;313(5):471-482.

Original Investigation

Transfusion of Plasma, Platelets, and Red Blood Cells in a 1:1:1 vs a 1:1:2 Ratio and Mortality in Patients With Severe Trauma

The PROPPR Randomized Clinical Trial

Table 2. Trial Outcomes by Treatment Group

	1:1:1 Group (n = 338)	1:1:2 Group (n = 342)	Difference (95% CI), %	Adjusted RR (95% CI)	*P* Value[a]
24-h Mortality, No. (%)[b]	43 (12.7)	58 (17.0)	−4.2 (−9.6 to 1.1)	0.75 (0.52 to 1.08)	.12
30-d Mortality, No. (%)[b]	75 (22.4)	89 (26.1)	−3.7 (−10.2 to 2.7)	0.86 (0.65 to 1.12)	.26
Achieved hemostasis					
No. (%)	291 (86.1)	267 (78.1)			.006

Table 3. Adjudicated Cause of Death by Treatment Group and Period From Randomization

	First 24 Hours		
	No. (%)		
	1:1:1 Group (n = 338)	1:1:2 Group (n = 342)	Difference (95% CI),%[a]
Total No. of deaths	43	58	
Cause of death[b]			
Exsanguination	31 (9.2)	50 (14.6)	−5.4 (−10.4 to −0.5)

Probability of Death

bjh guideline

A practical guideline for the haematological management of major haemorrhage

Beverley J. Hunt,[1] Shubha Allard,[2] David Keeling,[3] Derek Norfolk,[4] Simon J. Stanworth,[5] Kate Pendry[6] and on behalf of the British Committee for Standards in Haematology

Recommendations

In major obstetric haemorrhage, blood component management should follow a similar pathway as for non-pregnant patients (2C), except that meticulous attention should be paid to fibrinogen levels and consideration given to the early use of fibrinogen supplementation when fibrinogen levels are <2·0 g/l and there is on-going bleeding (1D).

In major obstetric haemorrhage, consideration should be given to using tranexamic acid (1B).

Ducloy-Bouthors *et al. Critical Care* 2011, **15**:R117
http://ccforum.com/content/15/2/R117

CRITICAL CARE

PPH >800 mL following vaginal delivery
TXA: loading dose 4 g over 1 hour, then infusion of 1 g/hour over 6 hours

Open Access

Number of patients			
ITT	77	74	
Per protocol	72	72	
Evolution to severe PPH, *n* (%)			
ITT	27 (35)	37 (50)	0.07
Per protocol	23 (32)	36 (50)	0.028
Persistent bleeding at T2, *n* (%)			
ITT	28 (36)	40 (54)	0.03
Per protocol	26 (36)	38 (53)	0.044
Haemoglobin drop >4 g/dL, *n* (%)			
ITT	19 (25)	32 (43)	0.02
Per protocol	15 (21)	34 (47)	< 0.001
PRBC transfusion before T4, *n* (%)			
ITT	10 (13)	13 (18)	0.17
Per protocol	7 (10)	12 (17)	0.65
PRBC units administered before T4, *n*			
ITT	32	62	0.26
Per protocol	18	38	0.4
PRBC transfusion total through day 42, *n* (%)			
ITT	13 (17)	20 (27)	0.33
Per protocol	9 (13)	20 (28)	0.16
PRBC units administered total through day 42, *n*			
ITT	28	62	< 0.001
Per protocol	24	62	< 0.001

Table 3 Assessment of PPH-related outcome[a] *(Continued)*

Arterial embolisation, *n* (%)			
ITT	5 (6.8)	5.1 (6.1)	1
Per protocol	4 (6.0)	5 (7.0)	0.73
Surgical arterial ligature or hysterectomy, *n* (%)			
ITT	0	2 (2.7)	0.24
Per protocol	0	2 (3.0)	0.5
Late postpartum curettage (after day 7), *n* (%)			
ITT	1 (1.3)	2 (2.7)	1
Per protocol	1 (1.4)	2 (2.8)	1
Any vasopressor, *n* (%)			
ITT	4 (5.2)	4 (5.4)	1
Per protocol	3 (4.2)	4 (5.5)	1
Intensive care unit stay, *n* (%)			
ITT	3 (3.9)	5 (6.7)	1
Per protocol	3 (4.2)	5 (7.0)	1
Mild dyspnea, *n* (%)			
ITT	0 (0)	1 (1.3)	1
Per protocol	0 (0)	1 (1.4)	1
Multiple organ failure, *n* (%)			
ITT	0 (0)	0 (0)	-
Per protocol	0 (0)	0 (0)	-

Haemorrhage Alleviation With Tranexamic Acid- Intestinal System (HALT-IT)

This study is currently recruiting participants. (see Contacts and Locations)

Verified September 2015 by London School of Hygiene and Tropical Medicine

Sponsor:
London School of Hygiene and Tropical Medicine

Collaborator:
Global trial which will include about 40 countries and over 200 hospitals

Information provided by (Responsible Party):
London School of Hygiene and Tropical Medicine

ClinicalTrials.gov Identifier:
NCT01658124

First received: July 26, 2012
Last updated: September 7, 2015
Last verified: September 2015
History of Changes

Primary Outcome Measures:

- The primary outcome is death in hospital (cause-specific mortality will also be recorded) [Time Frame: within 28 days of randomisation] [Designated as safety issue: Yes]

Secondary Outcome Measures:

- Re-bleeding [Time Frame: 28 days] [Designated as safety issue: No]
- Need for salvage surgery or radiological intervention [Time Frame: 28 days] [Designated as safety issue: No]
- Blood transfusion - blood or blood component units transfused [Time Frame: 28 days] [Designated as safety issue: No]
- Thromboembolic events (myocardial infarction, stroke, pulmonary embolism, deep vein thrombosis) [Time Frame: 28 days] [Designated as safety issue: Yes]
- Other adverse medical events (including renal failure, significant cardiac event, respiratory failure, hepatic failure, sepsis, pneumonia,

Arms

Experimental: Tranexamic acid
(total dose 8 grams)

Placebo Comparator: Placebo
(Sodium Chloride 0.9%)

Criteria

Inclusion Criteria:

- adult patients
- with acute significant upper or lower gastrointestinal bleeding
- where the responsible clinician is substantially uncertain as to the appropriateness of antifibrinolytic agents in the patient

Exclusion Criteria:

- The fundamental eligibility criterion is the responsible clinician's 'uncertainty' as to whether or not to use an antifibrinolytic agent in a particular patient with upper or lower gastrointestinal bleeding.
- There are no other exclusions.

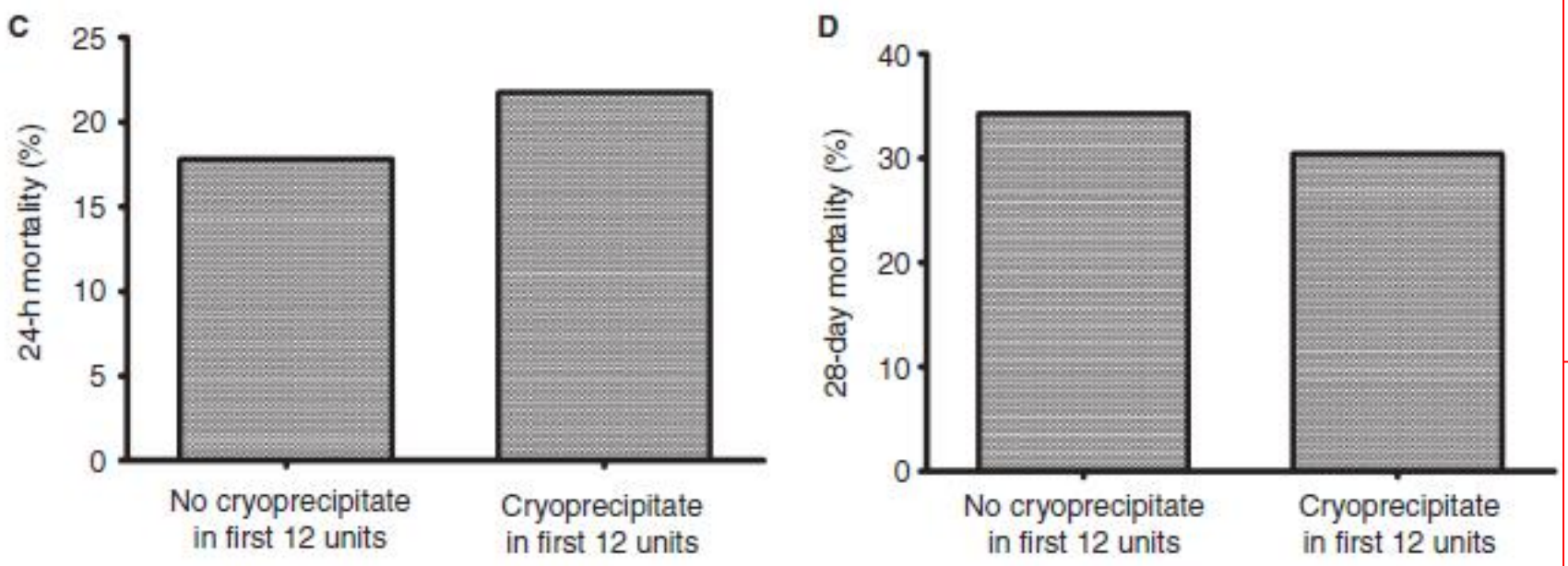
Fibrinogen levels during trauma hemorrhage, response to replacement therapy, and association with patient outcomes

C. ROURKE,*[1] N. CURRY,†[1] S. KHAN,* R. TAYLOR,† I. RAZA,* R. DAVENPORT,* S. STANWORTH† and K. BROHI*

J Thromb Haemost 2012; **10:** 1342–51.

Table 3 Independent variables associated with mortality

Parameter	Odds ratio	95% CI	*P*-value
Fibrinogen level	0.22	0.10–0.47	< 0.001



Journal of Thrombosis and Haemostasis, 5: 266–273

ORIGINAL ARTICLE

The decrease of fibrinogen is an early predictor of the severity of postpartum hemorrhage

B. CHARBIT,*
O. SIBONY,**
M. H. DENNIN

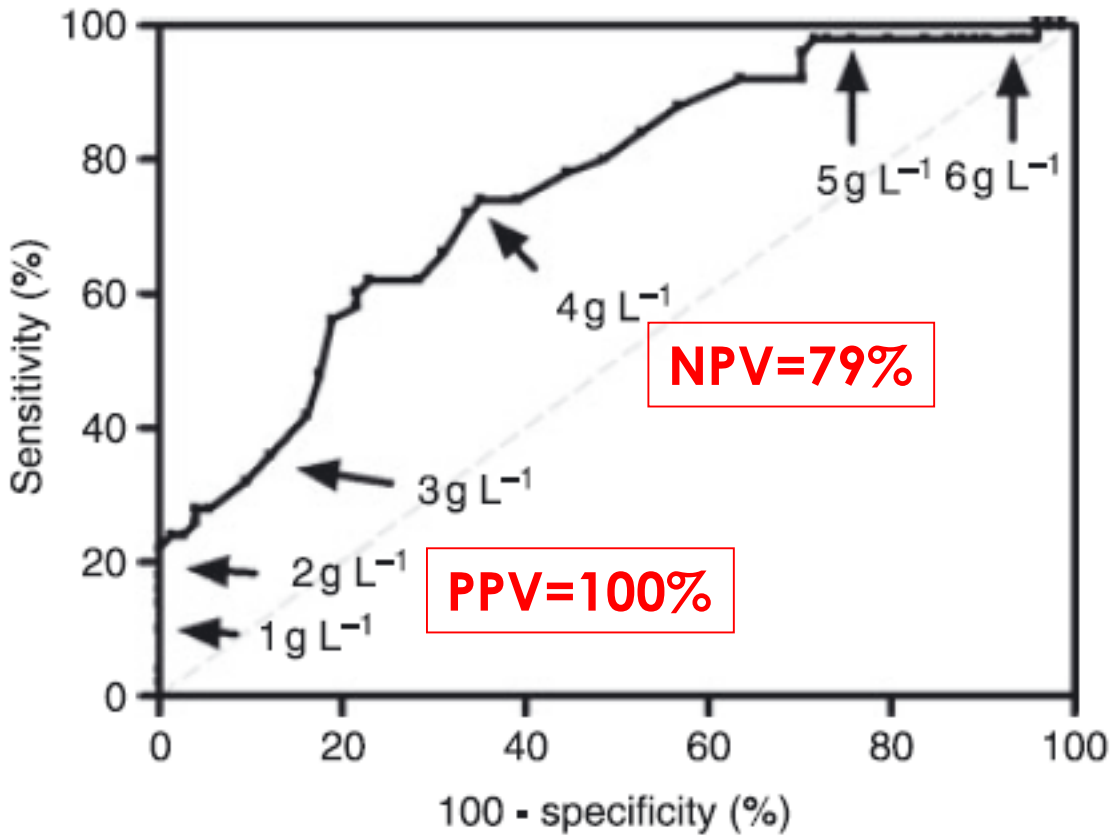


Fig. 3. ROC curve of fibrinogen plasma concentration at H0 for the diagnosis of severe postpartum hemorrhage.

E' la cima che determina i fianchi…

Hai imparato il "Fattore Zebra" al primo anno di Medicina: se senti rumore di zoccoli, pensa a dei cavalli, non a delle zebre.

- ✓ *Masch* *episodi*
  ricorre *ale viene*
  sottop *sospetto*
  di IBD
- ✓ *Il pa* *=1.42*

31.01 ore 1.30
Emoperitoneo 1500 cc

Rioperato

31.01 ore *[illegible]*
emoperi *[illegible]*, **1900 cc**
sb *[illegible]* **norragico**

Rioperato

06.02 ore 20.55
emoperitoneo, 2000 cc

Sempre INR normale, APTT ↑↑

Rioperato
Addome zaffato

B.R., luglio 2012

- ✓ *Maschio, 82 anni, ricoverato da un mese in un Reparto di Medicina Interna per anemizzazione in corso di dialisi, ematomi sottocutanei e muscolari diffusi, emartro spontaneo al ginocchio sinistro recidivato dopo artrocentesi*
- ✓ *Fabbisogno trasfusionale di circa 2 UEC/die con Hb intorno a 6 g/L*

Impostata terapia con protamina solfato 1f /die

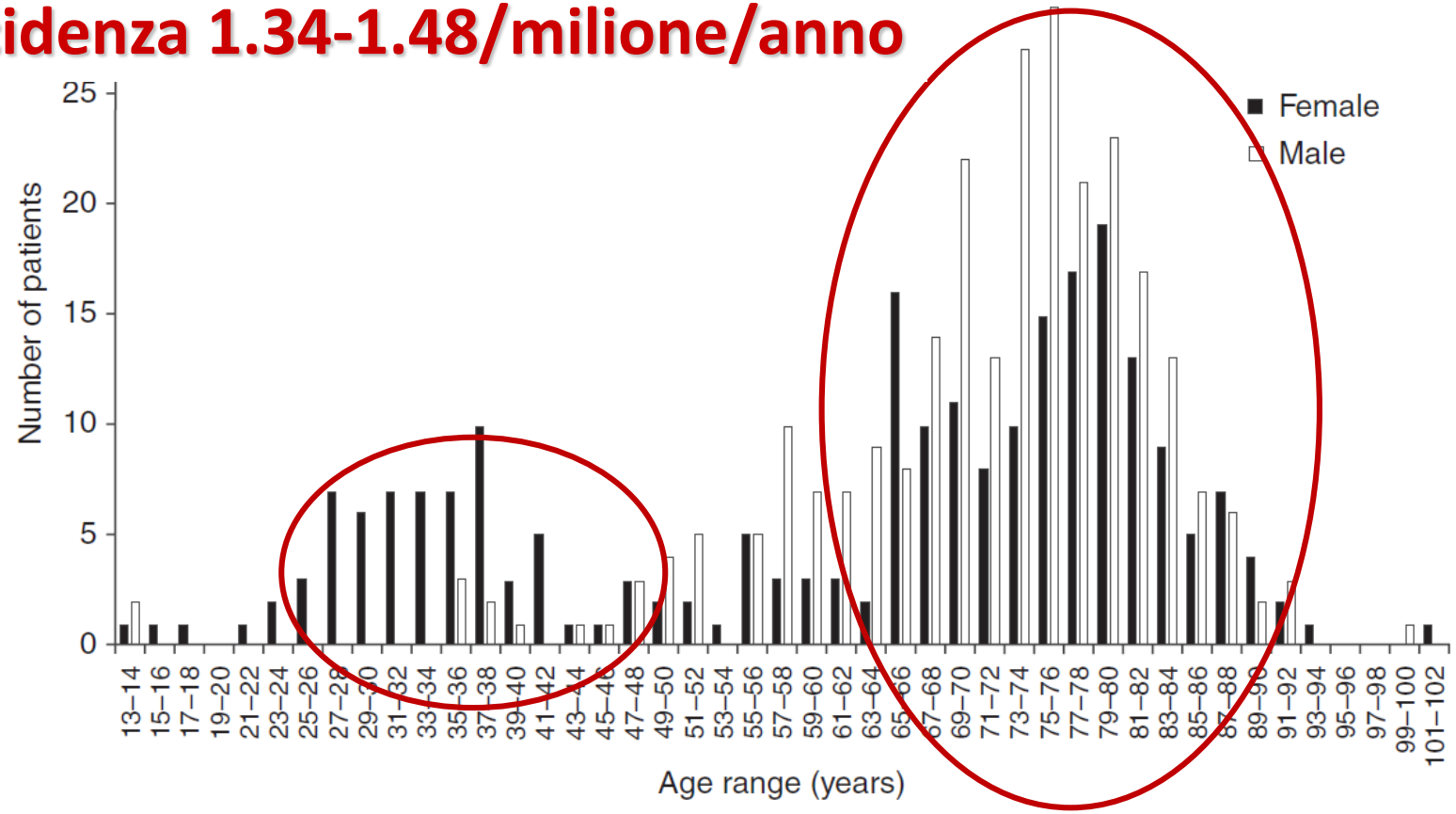
ORIGINAL ARTICLE

J Thromb Haemost 2012; **10**: 622–31.

Demographic and clinical data in acquired hemophilia A: results from the European Acquired Haemophilia Registry (EACH2)

P. KNOEBL,* P. MARCO,† F. BAUDO,‡ P. COLLINS,§ A. HUTH-KÜHNE,¶ L. NEMES,** F. PELLEGRINI,†† L. TENGBORN,‡‡ and H. LÉVESQUE,§§ ON BEHALF OF THE EACH2 REGISTRY CONTRIBUTORS[1]

Incidenza 1.34-1.48/milione/anno



ORIGINAL ARTICLE J Thromb Haemost 2012; 10: 622–31.

Demographic and clinical data in acquired hemophilia A: results from the European Acquired Haemophilia Registry (EACH2)

P. KNOEBL,* P. MARCO,† F. BAUDO,‡ P. COLLINS,§ A. HUTH-KÜHNE,¶ L. NEMES,**
F. PE
CON

Table 3 Bleeding before and after diagnosis

	Entire collective
Bleeding as trigger for diagnosis [*n* (%)]	467 (89.0)*
Time from bleeding event to definite diagnosis	
Median [days (IQR)]	3 (0–12)
More than 6 months [*n* (%)]	6 (1.3)
1–6 months [*n* (%)]	46 (9.8)
1 week–1 month [*n* (%)]	105 (22.4)
1 week [*n* (%)]	122 (26.1)
0 (−1 to 1 day) [*n* (%)]	174 (37.2)
Bleeding after diagnosis [*n* (%)]	
1 week–1 month	6 (1.3)
1 month–1year	4 (0.9)
> 1 year	5 (1.1)
No bleeding [*n* (%)]	33 (6.6)

ORIGINAL ARTICLE

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Table 6 Bleeding episodes

	All	Severe	Non-severe
Total no. of bleeding episodes [*n* (%)]	474	333 (70.3)	137 (28.9)
Cause [*n* (%)]			
Spontaneous	367 (77.4)	250 (76.0)	113 (83.7)
Trauma	40 (8.4)	33 (10.0)	7 (5.2)
Surgery	39 (8.2)	30 (9.1)	9 (6.7)
Peripartum	17 (3.6)	14 (4.3)	2 (1.5)
Other	13 (2.7)	8 (2.4)	4 (3.0)
Site/type [*n* (%)]			
Skin	252 (53.2)	152 (46.2)	97 (71.9)
Deep (musculoskeletal, retroperitoneal)	238 (50.2)	214 (65.0)	21 (15.6)
Mucosa	150 (31.6)	113 (34.4)	35 (25.9)
Hemarthrosis	23 (4.9)	17 (5.2)	6 (4.4)
Central nervous system	5 (1.1)	5 (1.5)	0 (0)

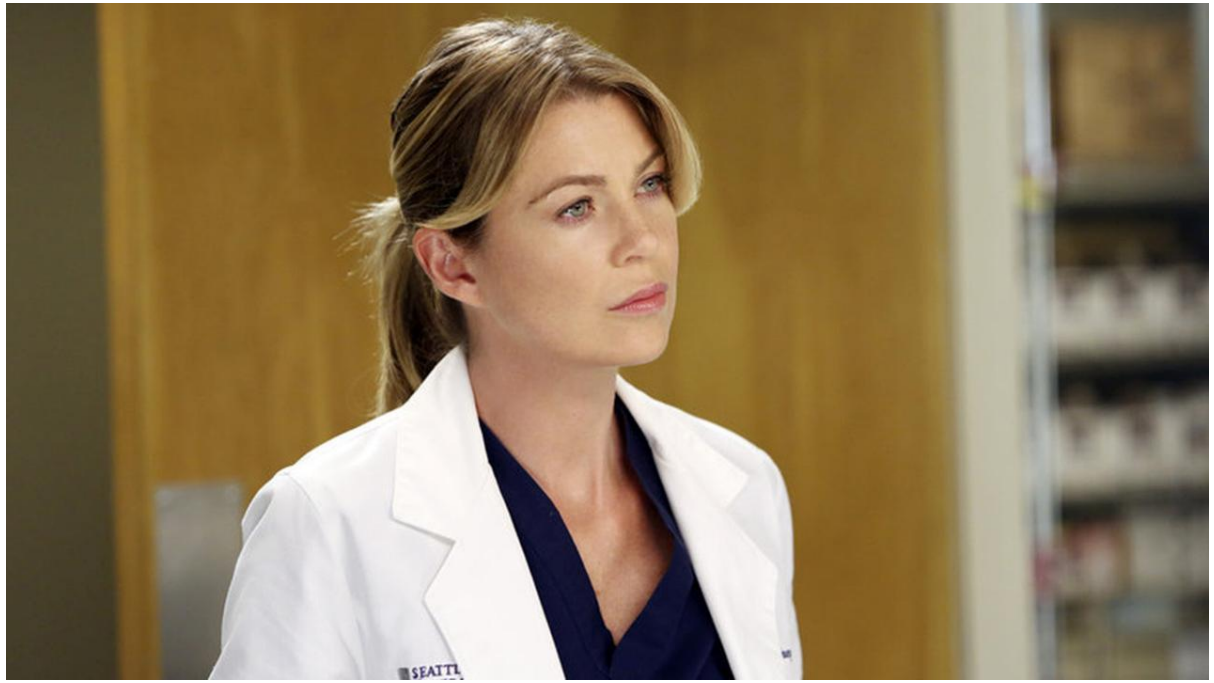
J Thromb Haemost 2012; 10: 622–31.

Der … results
fro… …H2)

P. KN…
F. PE… …STRY
CONT…

Table 7 Outcome and adverse events

	All patients entered*
No. of patients [*n* (%)]	331 (66.1%)
Observation time [median, IQR; (days)]	258 (74–685)
Survival	
Alive at final follow-up	191 (57.7%)
Death reported	87 (26.3%)
Unknown survival state	47 (14.2%)
Remission	
Complete remission [*n*/total (%)]	237 (71.6%)
Stable remission on IST [*n*/total (%)]	39 (11.8%)
No remission and off IST	33 (10.0%)
Unknown remission state	22 (6.7%)
Cause of death [*n* (%)]	
Fatal bleeding	15 (17.2% of deaths) (4.5% of group)
Hemostatic therapy	0 (0%)



I problemi terapeutici

blood

2012 120: 39-46
Prepublished online May 22, 2012;
doi:10.1182/blood-2012-02-408930

Management of bleeding in acquired hemophilia A: results from the European Acquired Haemophilia (EACH2) Registry

Francesco Baudo, Peter Collins, Angela Huth-Kühne, Hervé Lévesque, Pascual Marco, László Nemes

Table 3. Rates of control for first bleeding episodes by first-line therapy

	First-line bleeding control	
Hemostatic agent	**n**	**%**
Unmatched samples		
Bypassing agent	219	91.8
FVIIa	159	91.2
aPCC	60	93.3
Replacement therapy	69	69.6
FVIII	55	70.1
DDAVP	14	64.3
PS-matched samples		
Bypassing agent	60	93.3
Replacement therapy	60	68.3
rFVIIa	57	93.0
aPCC	57	93.0

Acquired inhibitors of clotting factors:
AICE recommendations for diagnosis and management

- The use of FVIII concentrates and DDAVP should be reserved to patients with measurable FVIII plasma levels and low inhibitor titres. In these cases the initial dose of FVIII must be sufficient to overcome the inhibitor and provide an adequate haemostatic level. It is, therefore, always appropriated to evaluate the adequacy of the treatment by measuring FVIII levels after administration of the initial dose and, subsequently, regular monitoring the FVIII level, at least daily. This is also useful to detect the development of a possible anamnestic response **(Grade 2C recommendation)**.

blood

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Prepublished online May 22, 2012;
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Management of bleeding in acquired hemophilia A: results from the European Acquired Haemophilia (EACH2) Registry

Francesco Baudo, Peter Collins, Angela Huth-Kühne, Hervé Lévesque, Pascual Marco, László

Table 2. Matched sample baseline characteristics according to treatment of the first bleeding episode (bypassing agent vs FVIII or DDAVP and rFVIIa vs aPCC)

Variable	Bypassing agent, median (IQR)	FVIII or DDAVP, median (IQR)	*P**	rFVIIa,† median (IQR)	aPCC, median (IQR)	*P**
Patients, n	60	60		57	57	
Age, y	74.0 (24.0-91.0)	72.5 (13.0-104.0)	.95	72.00 (39.00-91.00)	77.00 (24.00-92.00)	.41
Sex, n (%)			.69			.41
Female	25 (41.7)	23 (38.3)		37 (64.91)	33 (57.89)	
Male	35 (58.3)	37 (61.7)		20 (35.09)	24 (42.11)	
Weight, kg	70.0 (40.0-107.0)	68.0 (40.0-113.0)	.49	70.00 (40.00-120.00)	70.00 (44.00-107.00)	.66
FVIII level, IU/dL	2.0 (0.0-40.0)	3.0 (0.0-34.0)	.61	1.25 (0.00-32.00)	1.00 (0.00-40.00)	.41
Hb, g/dL	8.4 (3.0-14.2)	8.8 (3.3-14.4)	.41	8.50 (3.00-14.00)	8.40 (4.60-14.80)	.84
Inhibitor titer, BU/mL	9.3 (1.0-2765.0)	8.0 (0.3-200.0)	.52	16.00 (1.00-2765.00)	17.00 (0.10-1700.00)	.52
Therapy delay, d	0.01 (0.0-0.13)	0.01 (0.0-0.11)	.46	0.01 (0.00-0.09)	0.01 (0.00-0.54)	.64
Cause of bleeding, n (%)			.51			.62
Traumatic	16 (26.7)	13 (21.7)		10 (17.54)	8 (14.04)	
Spontaneous	44 (73.3)	47 (78.3)		47 (82.46)	49 (85.96)	
Bleeding site, n (%)			.99			.55
Deep	30 (50.0)	30 (50.0)		44 (77.19)	44 (77.19)	
Hemarthrosis	3 (5.0)	2 (3.3)		0 (0.00)	1 (1.75)	
Mucosa	15 (25.0)	16 (26.7)		5 (8.77)	4 (7.02)	
Skin	12 (20.0)	12 (20.0)		8 (14.04)	8 (14.04)	
Severity of bleeding, n (%)			.63			.56
Severe	47 (78.3)	49 (81.7)		49 (85.96)	51 (89.47)	
Nonsevere	13 (21.6)	11 (18.3)		8 (14.04)	6 (10.53)	

blood

2012 120: 39-46
Prepublished online May 22, 2012;
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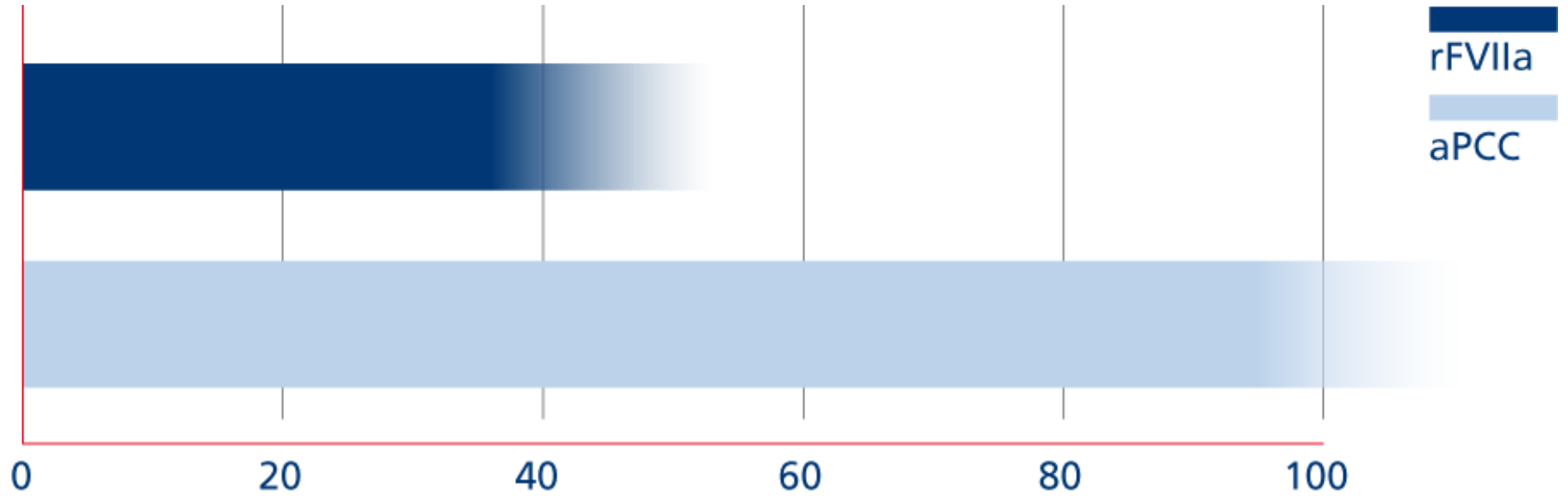
Table 1. Unmatched sample baseline characteristics according to treatment of the first bleeding episode (bypassing agent vs FVIII or DDAVP and rFVIIa vs aPCC)

Variable	Bypassing agent, median (IQR)	FVIII or DDAVP, median (IQR)	P*	rFVIIa, median (IQR)	aPCC, median (IQR)	P†
Patients, n	219	69		159	60	
Age, y	73.0 (15.0-92.0)	73.0 (13.0-104.0)	.94	73.0 (15.0-91.0)	76.5 (24.0-92.0)	.02
Sex, n (%)			.07			.06
Female	109 (49.7)	26 (37.7)		73 (45.9)	36 (60.0)	
Male	110 (50.8)	43 (62.3)		86 (54.1)	24 (40.0)	
Weight, kg	69.0 (40.0-130.0)	69.0 (40.0-113.0)	.92	69.0 (40.0-130.0)	69.2 (44.0-107.0)	.70
FVIII level, IU/dL	1.0 (0.0-40.0)	3.0 (0.0-34.0)	.03	2.0 (0.0-32.0)	1.0 (0.0-40.0)	.13
Hb, g/dL	8.6 (3.0-15.2)	8.8 (3.3-14.4)	.57	8.6 (3.0-15.2)	8.4 (4.6-14.8)	.90
Inhibitor titer, BU/mL	15.4 (0.1-2765.0)	8.0 (0.3-200.0)	.0003	15.0 (1.0-2765.0)	17.0 (0.1-1700.0)	.99
Therapy delay, days	0.01 (0.0-0.5)	0.01 (0.00-0.11)	.34	0.01 (0.00-0.27)	0.01 (0.00-0.54)	.76
Ancillary antifibrinolytic therapy, n (%)	30 (13.7)	20 (29.0)‡	.0035	27 (17.0)	3 (5.0)	.0215
Cause of bleeding, n (%)			.715			.08
Unknown	1	0		1	0	
Traumatic	46 (21.1)	16 (23.2)		38 (24.1)	8 (13.3)	
Spontaneous	172 (78.9)	53 (76.8)		120 (75.9)	52 (86.7)	
Bleeding site, n (%)			.04			.12
CNS	5 (2.3)	0 (0.0)		5 (3.1)	0 (0.0)	
Deep muscle	139 (63.4)	32 (46.4)		94 (59.1)	45 (75.0)	
Hemarthrosis	6 (2.7)	3 (4.3)		5 (3.1)	1 (1.7)	
Mucosa	34 (15.6)	21 (30.5)		30 (18.8)	4 (6.6)	
Skin	34 (15.6)	13 (18.8)		24 (15.2)	10 (16.7)	
Multiple sites	1 (0.4)	0 (0.0)		1 (0.7)	0 (0.0)	
Severity of bleeding, n (%)			.031			.31
Unknown	1	0		1	0	
Severe	193 (88.5)	54 (78.2)		142 (89.8)	51 (85.0)	
Nonsevere	25 (11.5)	15 (21.8)		16 (10.1)	9 (15.0)	

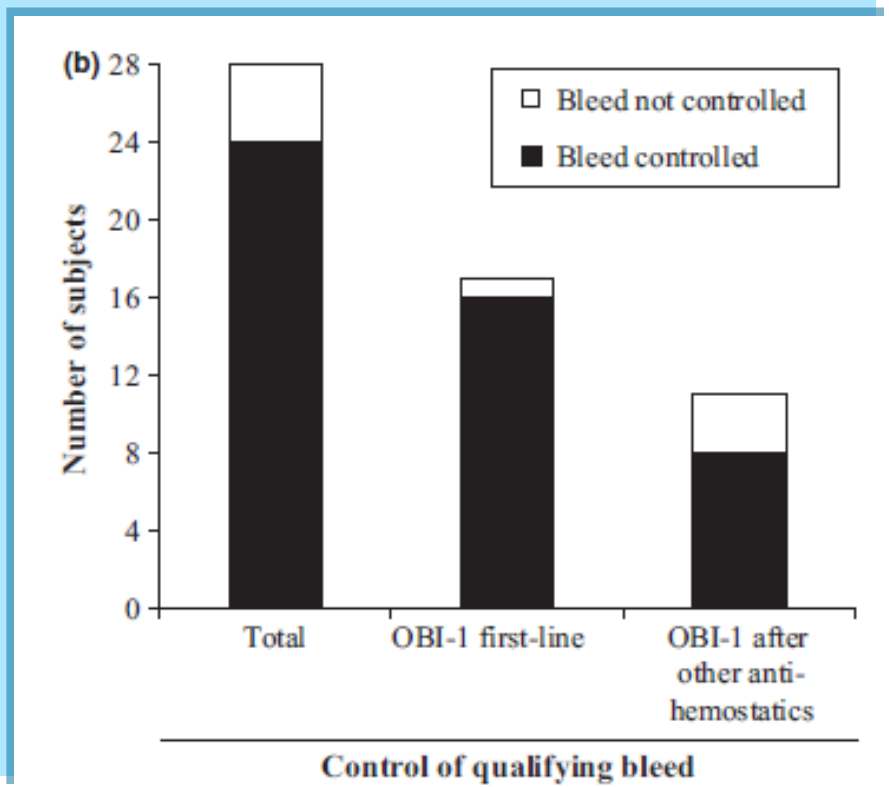


Time to bleeding control (hrs)

ORIGINAL ARTICLE *Clinical haemophilia* *Haemophilia* (2015), **21**, 162–170

Efficacy and safety of OBI-1, an antihaemophilic factor VIII (recombinant), porcine sequence, in subjects with acquired haemophilia A

R. KRUSE-JARRES,* J. ST-LOUIS,† A. GREIST,‡ A
A. DREBES,¶ E. GOMPERTS,** C. BOURGEOIS,††
B. EWENSTEIN‡‡



Efficacy:

- ✓85.7% of subjects
- ✓94% of subjects if used as a 'first-line'
- ✓73% of subjects if used after another haemostatic agent
- ✓Median cumulative dose in the first 24 h post infusion was 458.7 U/kg with 3.5 infusions (median) at an interval of 7.4 h between doses
- ✓10 subjects had measurable levels of anti-pFVIII antibodies prior to treatment .

Table 3. Individual FVIII activity levels and assessment of response to OBI-1 in AHA patients.

Subject	FVIII activity levels* (%)				Response assessment at 24 h
	Pre-dose	Immediate post -first dose	Highest in 24 h	At 24 h‡	
1	1	258	258	46	Partially effective
2	18	540	601	352	Effective
3	1	38	248	169	Effective
4	26	426	426	270	Effective
5	22	270	270	106	Effective
6	1	224	224	74	Effective
7	0	76	246	220	Partially effective§
8	29	200	200	98	Partially effective§
9	1	119	356	280	Effective
10	9	417	417	184	Effective
11	1	77	340	91	Effective
12	0	20	297	74	Effective
13	0	73	231	231	Effective
14	5	163	171	105	Effective
15	NA	195	230	86	Effective§
16	1	116	213	61	Effective
17	6	163	173	98	Effective
18	7	296	296	156	Effective§
19	7	240	240	70	Effective
20	1	22	160	2	Effective
21	3	288	369	369	Partially effective
22	14	439	439	221	Effective
23	6	209	209	64	Effective
24	1	158	410	109	Effective
25	2	206	252	114	Effective
27	3	401	401	111	Effective
28	4	72	173	26	Effective
29	1	342	775	227	Effective

Haemophilia (2015), **21**, 162–170

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R. KRUSE-JARRES,* J. ST-LOUIS,† A. GREIST,‡ A. SHAPIRO,‡ H. SMITH,§ P. CHOWDARY,¶ A. DREBES,¶ E. GOMPERTS,** C. BOURGEOIS,†† M. MO,‡‡ A. NOVACK,‡‡ H. FARIN‡‡ and B. EWENSTEIN‡‡

Table 4. Subjects with neutralizing antibodies against porcine FVIII.

	Anti-pFVIII					Anti-hFVIII	
Subject	Baseline (BU)	First detected after first infusion (BU) [days after first infusion]	Peak after treatment (BU)	Final (BU)	Response assessment at 24 h	Baseline (BU)	Final (BU)
	With baseline inhibitors						
3	10	N/A	2	Not detectable	Effective	20	Not detectable
7	3	N/A	6	6	Partially effective*	142	77
11	4	N/A	Not detectable	Not detectable	Effective	651	98
12	29	N/A	Not detectable	Not detectable	Effective	21	Not detectable
13	1	N/A	Not detectable	Not detectable	Effective	33	Not detectable
16	3	N/A	Not detectable	Not detectable	Effective	98	49
20	10	N/A	Not detectable	Not detectable	Effective	87	0.6
23	4	N/A	3	Not detectable	Effective	29	0.6
24	0.8	N/A	1†	Not detectable	Effective	21	Not detectable
28	15	N/A	183	183	Effective	79	47
	With *de novo* inhibitors						
6	Not detectable	28 [35 days]	51	51	Effective	80	Not detectable
15	Not detectable	0.6 [85 days]	0.6	0.6	Effective*	80	NA
18	Not detectable	8† [8 days]	8†	8†	Effective*	26	128†
19	Not detectable	22† [18 days]	108	108	Effective	24	169
27	Not detectable	1 [22 days]	166	42	Effective	10	0.07

blood

2012 120: 39-46
Prepublished online May 22, 2012;
doi:10.1182/blood-2012-02-408930

Management of bleeding in acquired hemophilia A: results from the European Acquired Haemophilia (EACH2) Registry

Francesco Baudo, Peter Collins, Angela Huth-Kühne, Hervé Lévesque, Pascual Marco, László Nemes, Fabio Pellegrini, Lilian Tengborn and Paul Knoebl

	rFVIIa	aPCC	FVIII/DDAVP
	Pts = 174	Pts = 63	Pts = 70
Thromboembolic events n (%)	5 (2.9)	3 (4.8)	0

blood

2012 120: 47-55
Prepublished online April 18, 2012;
doi:10.1182/blood-2012-02-409185

Immunosuppression for acquired hemophilia A: results from the European Acquired Haemophilia Registry (EACH2)

Peter Collins, Francesco Baudo, Paul Knoebl, Hervé Lévesque, László Nemes, Fabio Pellegrini,

Terapia	RC	Giorni alla RC	Ricadute	Giorni alla ricaduta	RC continua
Steroidi n=142	83 (58)	34 (17-76)	15 (18)	134 (36-317)	68 (48)
S + citotox n=83	66 (80)	32 (12-77)	8 (12)	139 (14-135)	58 (70)
Rituximab n=51	31 (61)	65 (29-144)	1 (3)	44	30 (59)

Poiché i gruppi non sono bilanciati, solo analisi descrittiva:

- **tempo alla RC più precoce con steroidi e steroidi + agenti citotossici**
- **% RC continua maggiore con steroidi + agenti citotossici vs steroidi da soli**

blood

2012 120: 47-55
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Immunosuppression for acquired hemophilia A: results from the European Acquired Haemophilia Registry (EACH2)

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Eventi avversi (EA) alla TIS di 1ª linea

Terapia	EA totali n (%)	Infezioni	Neutropenia	Diabete	Disturbi psichiatrici
Steroidi n = 142	36/142 (25)	23 (16)	2 (1)	11 (8)	6 (4)
Steroidi + Cyc n = 83	34/83 (41)	22 (27)	12 (14)	5 (6)	3 (4)
Rituximab n = 51	19/51 (37)	6 (12)	9 (18)	11 (22)	1 (2)

blood

2012 120: 47-55
Prepublished online April 18, 2012;
doi:10.1182/blood-2012-02-409185

Immunc … the
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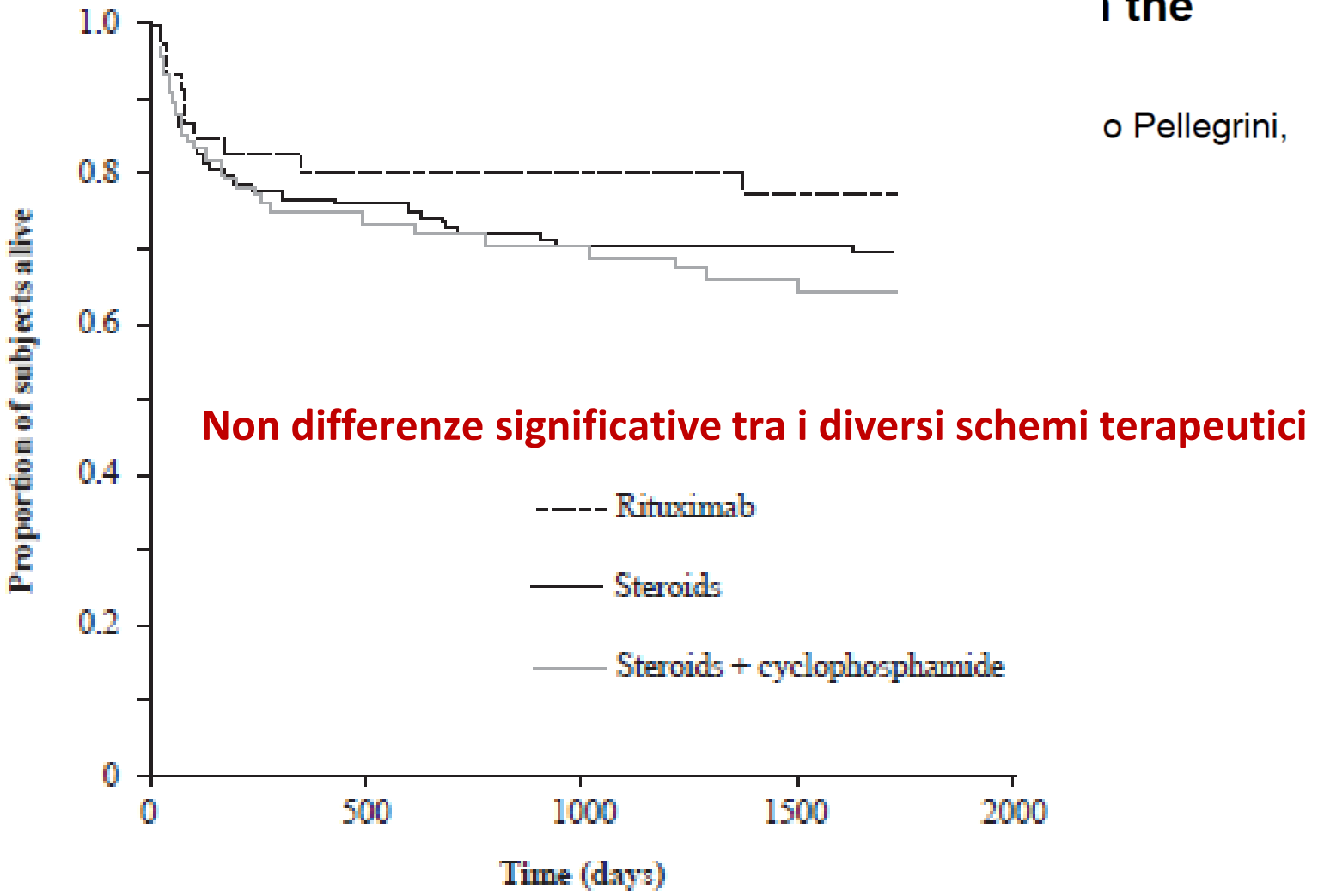
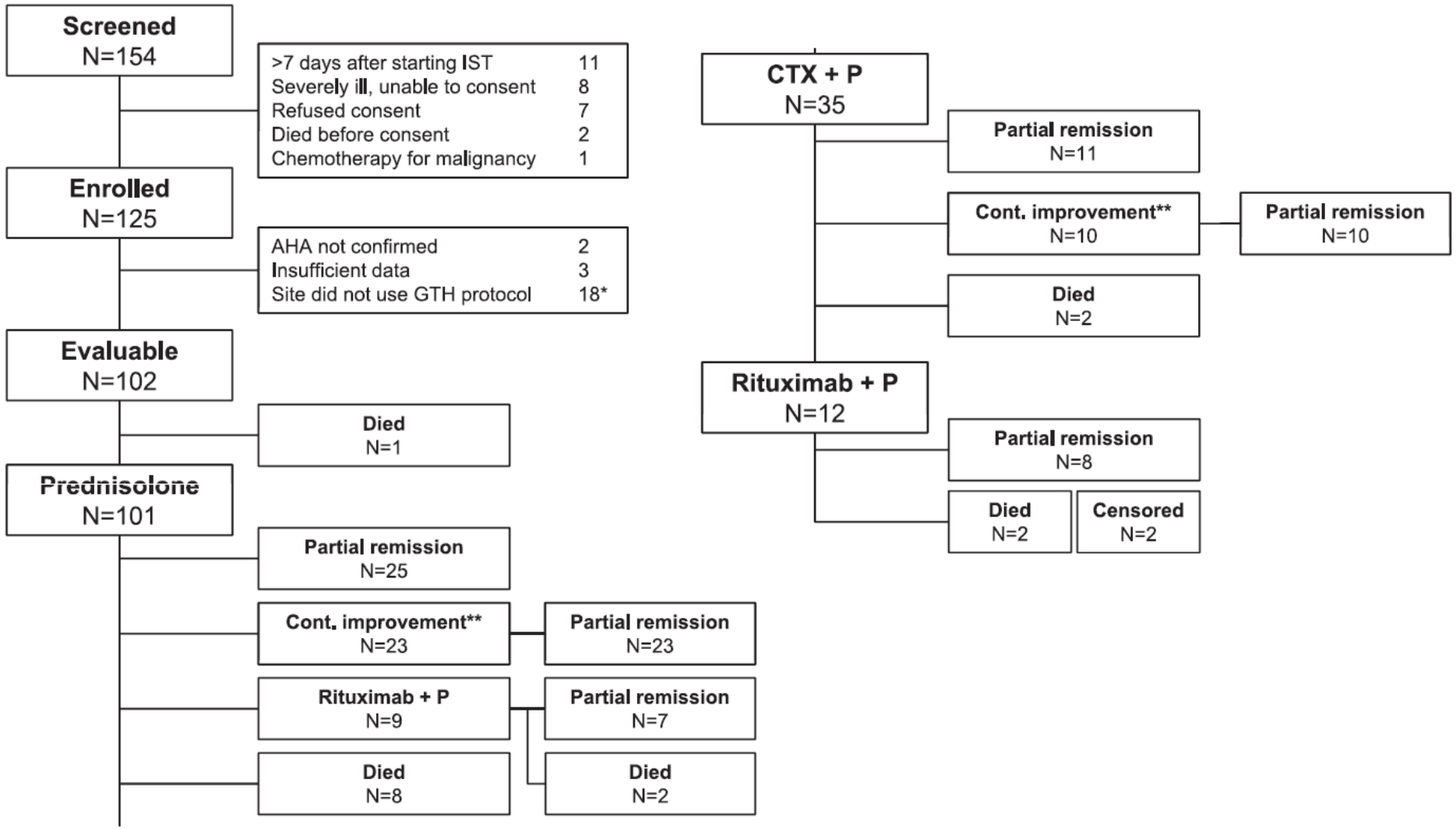


Non differenze significative tra i diversi schemi terapeutici

(*Blood*. 2015;125(7):1091-1097)

Prognostic factors for remission of and survival in acquired hemophilia A (AHA): results from the GTH-AH 01/2010 study

Andreas Tiede,[1] Robert Klamroth,[2] Rüdiger E. Scharf,[3] Ralf U. Trappe,[4,5] Katharina Holstein,[6] Angela Huth-Kühne,[7]



(*Blood*. 2015;125(7):1091-1097)

Prognostic factors for remission of and survival in acquired hemophilia A (AHA): results from the GTH-AH 01/2010 study

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Table 4. Predictors of remission and survival: multivariate analysis

Baseline variable	PR	CR	OS
FVIII activity <1 IU/dL	0.52 (0.33-0.81)**	0.49 (0.29-0.85)*	2.40 (1.10-5.22)*
Inhibitor concentration >20 BU/mL	0.77 (0.49-1.21)	0.75 (0.43-1.29)	1.20 (0.54-2.67)
Female gender	1.22 (0.77-1.91)	1.30 (0.76-2.24)	0.58 (0.26-1.31)
Age >74 y	0.94 (0.58-1.50)	0.76 (0.43-1.32)	1.76 (0.82-3.78)
Underlying disorder			
Autoimmunity	1.32 (0.77-2.28)	0.88 (0.45-1.72)	1.02 (0.36-2.84)
Malignancy	0.58 (0.28-1.21)	0.62 (0.27-1.44)	2.91 (1.12-7.52)*
Pregnancy	0.61 (0.23-1.65)	0.74 (0.27-2.04)	—
WHO-PS >2	0.76 (0.48-1.21)	0.39 (0.21-0.72)**	3.38 (1.55-7.37)**

Data are presented as adjusted HR (CI).
*$P < .05$.
**$P < .01$.

E' la cima che determina i fianchi…

Modena, 16 aprile 2013

Rivedo oggi il signor valutato per una diatesi emorragica manifestatasi nel corso degli ultimi anni con diversi eventi di entità modesta ma ricorrenti:

- Gengivorragia BS 2
- Sanguinamenti cutanei BS 2
- Sanguinamento emorroidario BS1
- Sanguinamento da ferite minori BS 1
- Totale BS = 6

Da segnalare un aPTT allungato in due controlli successivi ed una CM IgG kappa. Non riferita diatesi emorragica familiare. Gruppo sanguigno A.

Gli esami hanno mostrato: fattore VIII:C=32%, VWF:RiCof 5%, VWF:ag 11%.

Credo che la caratterizzazione e la diagnosi precisa di malattia di Willebrand richiedano un consulto da parte di un Centro di terzo livello, e suggerisco quello di Vicenza diretto dal Prof. Rodeghiero.

Blood Transfus 2015; 13; 498-513

Acquired inhibitors of clotting factors: AICE recommendations for diagnosis and management

Massimo Franchini[1], Giancarlo Castaman[2], Antonio Coppola[3], Cristina Santoro[4], Ezio Zanon[5], Giovanni Di Minno[3,6], Massimo Morfini[7], Elena Santagostino[8], Angiola Rocino[9], on behalf of the AICE Working Group*

bjh guideline

British Journal of Haematology, 2013, 162, 758–773

Diagnosis and management of acquired coagulation inhibitors: a guideline from UKHCDO

A United Kingdom Haemophilia Centre Doctors' Organization (UKHCDO) guideline approved by the British Committee for Standards in Haematology Peter W Collins,[1] Elizabeth Chalmers,[2] Daniel Hart,[3] Ian Jennings,[4] Ri Liesner,[5] Savita Rangarajan,[6] Kate Talks,[7] Michael Williams[8] and Charles R. M. Hay[9]

How I treat the acquired von Willebrand syndrome

Andreas Tiede,[1] Jacob H. Rand,[2] Ulrich Budde,[3] Arnold Ganser,[1] and Augusto B. Federici[4]

(*Blood.* 2011;117(25):6777-6785)

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13; 498-513

Table I - Pathophysiological mechanisms of acquired abnormalities of von Willebrand factor and associated conditions.

Pathogenic mechanism		Associated conditions
1)	Specific or non-specific autoantibodies generating immune complexes with vWF, increasing its clearance from the circulation	- Lymphoproliferative disorders - Tumours - Immunological disorders
2)	vWF adsorption onto cell membranes of tumour cells or other surfaces	- Lymphoproliferative disorders - Wilms' tumour - Myeloproliferative disorders
3)	vWF degradation by increased shear stress	- Congenital heart disease - Aortic stenosis (Heyde's syndrome) - Endocarditis - Severe atherosclerosis - Beta thalassaemia major
4)	Reduced vWF synthesis	- Hypothyroidism
5)	Increased vWF proteolysis by specific proteases	- Myeloproliferative disorders - Uraemia - Ciprofloxacin
6)	Increased vWF proteolysis by non-specific proteases	- Primary hyperfibrinolysis - Secondary hyperfibrinolysis - Fibrinolytic therapy
7)	Idiopathic	- Valproic acid - Amyloidosis - Viral infections - Mixed cryoglobulinaemia

(*Blood.* 2011;117(25):6777-6785)

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Table 1. Differential diagnosis between AVWS and VWD

Aspect	In favor of AVWS	In favor of VWD	Limitations
Personal history	Late onset of bleeding Uneventful surgery before onset of bleeding	Early onset of bleeding No uneventful surgery or no previous high-risk situations	Variable penetrance of VWD
Family history	Negative	Positive	Variable penetrance of VWD
AVWS-associated disorder	Present	Absent	Coincidental presence of highly prevalent disorders (eg, MGUS in the elderly)
Laboratory evaluation	Presence of inhibitor or VWF-binding antibodies	VWF gene mutation	Low frequency of detectable inhibitors in AVWS Alloantibodies in rare cases of VWD type 3
Treatment response	Remission after treatment of underlying disorder Response to IVIG (in IgG-MGUS-associated AVWS) Short-lived response to VWF-containing concentrates or desmopressin	Normal recovery and half-life of VWF-containing concentrate Sustained response to desmopressin	Cannot be assessed before treatment

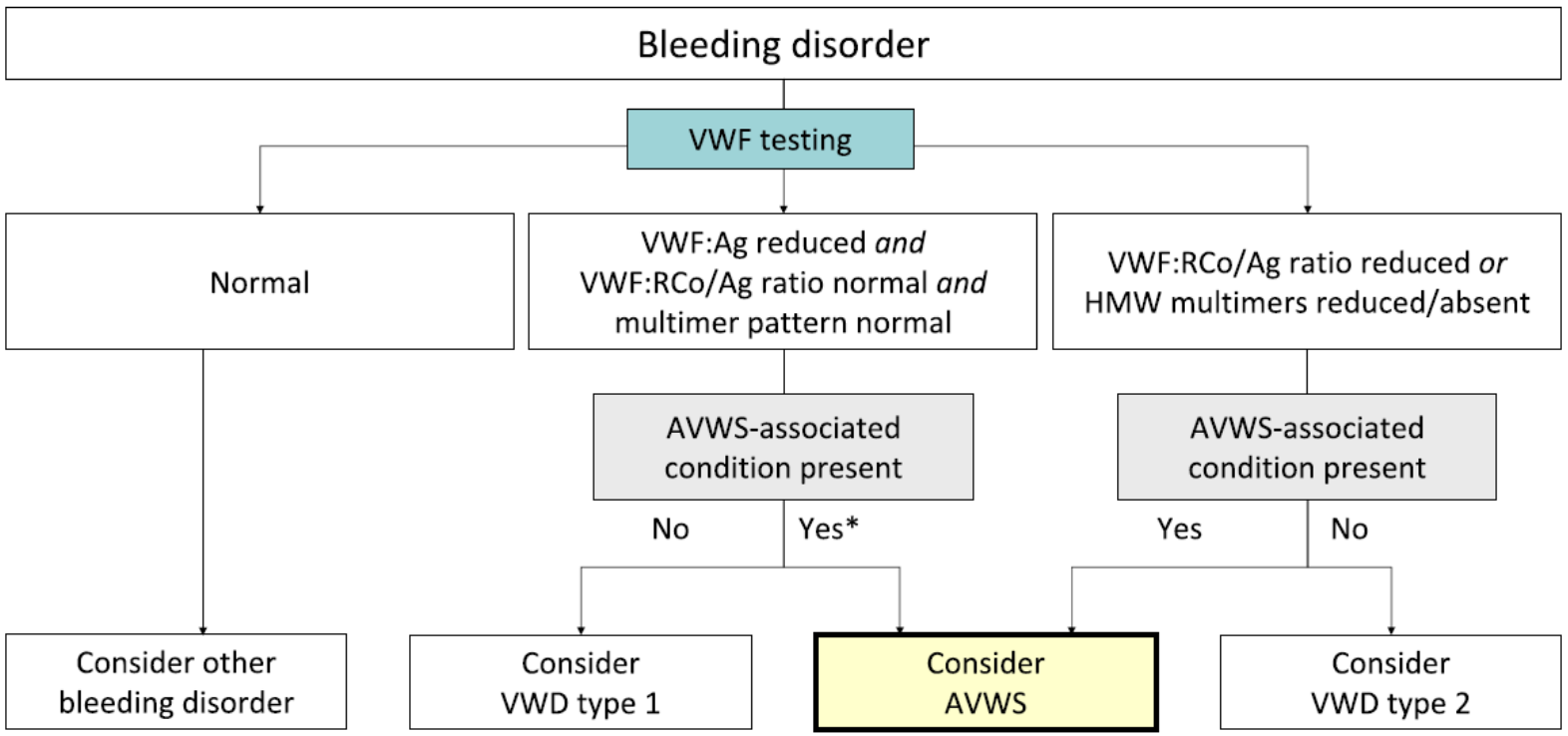
VWD indicates von Willebrand disease; VWF, von Willebrand factor; MGUS, monoclonal gammopathy of undetermined significance; and IVIG, intravenous immunoglobulin.

How I treat the acquired von Willebrand syndrome

(*Blood.* 2011;117(25):6777-6785)

Andreas Tiede,[1] Jacob H. Rand,[2] Ulrich Budde,[3] Arnold Ganser,[1] and Augusto B. Federici[4]

A



How I treat the acquired von Willebrand syndrome

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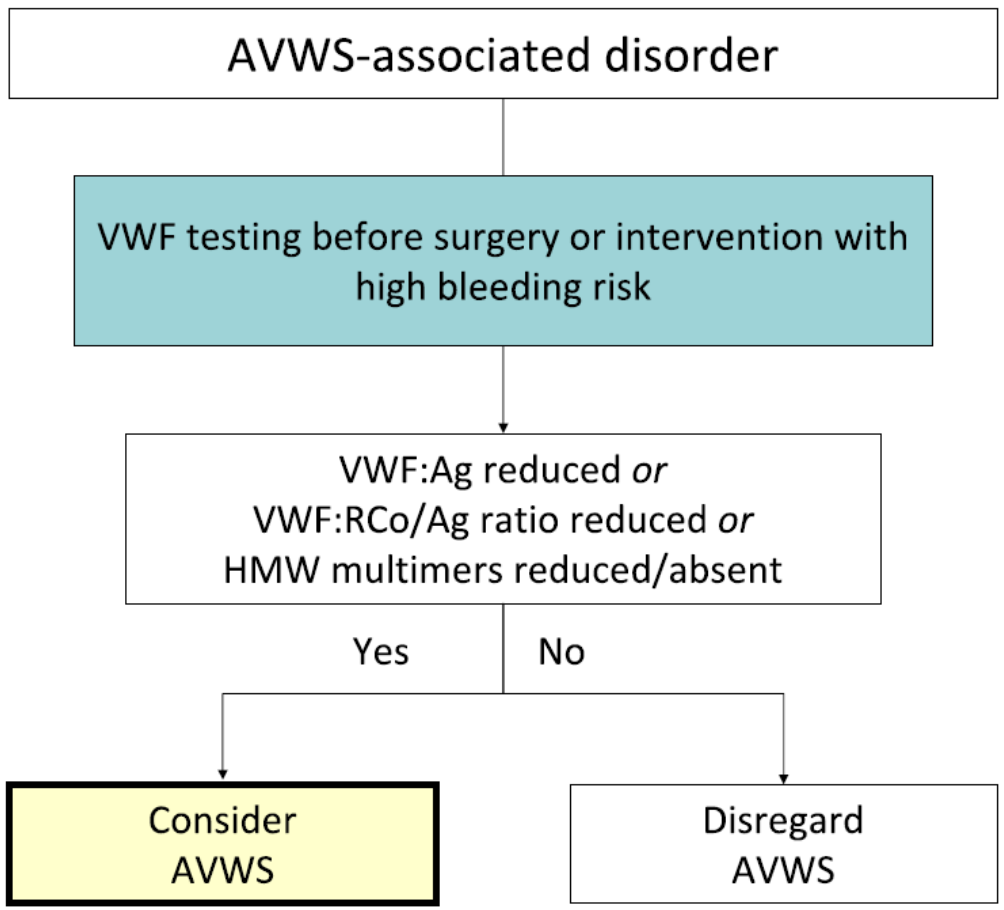
Andreas Tiede,[1] Jacob H. Rand,[2] Ulrich Budde,[3] Arnold Ganser,[1] and Augusto B. Federici[4]

B



(*Blood.* 2011;117(25):6777-6785)

How I treat the acquired von Willebrand syndrome

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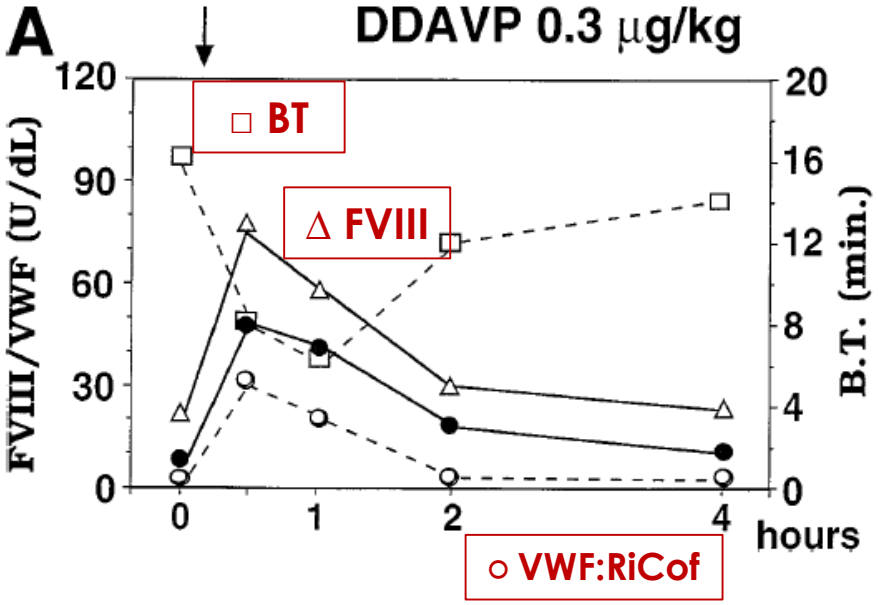
Routine tests

The initial tests used to assess AVWS are the same as for von Willebrand disease. Figure 3 shows results derived from a single-center cohort study,[18] which were similar to other studies and registries in the field. Bleeding time and activated partial thromboplastin time are not very useful. FVIII:C, VWF:Ag, VWF:RCo, and collagen-binding activity (VWF:CB) are sometimes decreased, most frequently in lymphoproliferative disorders.[16,18] A reduced function/antigen ratio (VWF:RCo/Ag or VWF:CB/Ag) can indicate structural or functional disorders, even if the absolute activity is within normal limits.

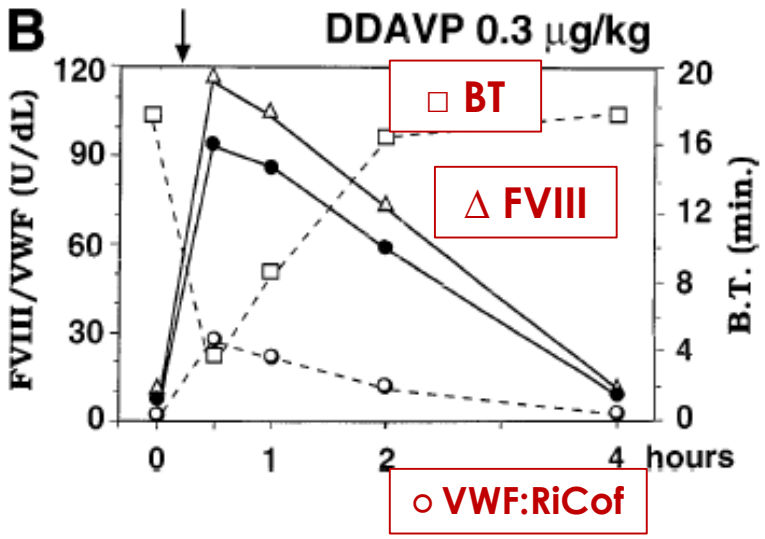
Test alla desmopressina

- ✓Da eseguire ad ogni nuova diagnosi per valutare la risposta
- ✓Infusione DDAVP 0.3 mg/kg
- ✓Valutazione FVIII e vWF (RiCof) a tempo 0, 1, 2 e 4 ore

MGUS Ig-G



MGUS Ig-M

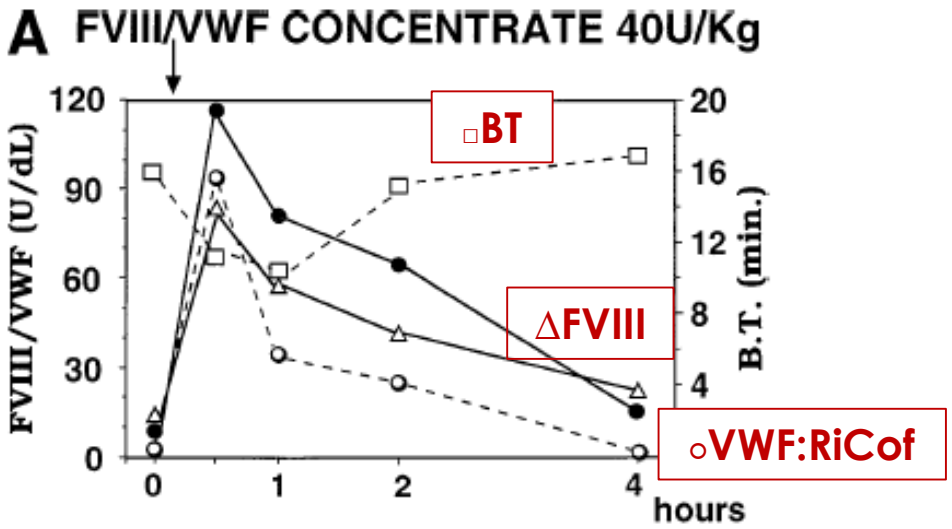


Federici A et al. Blood 1998;92: 2707-2711

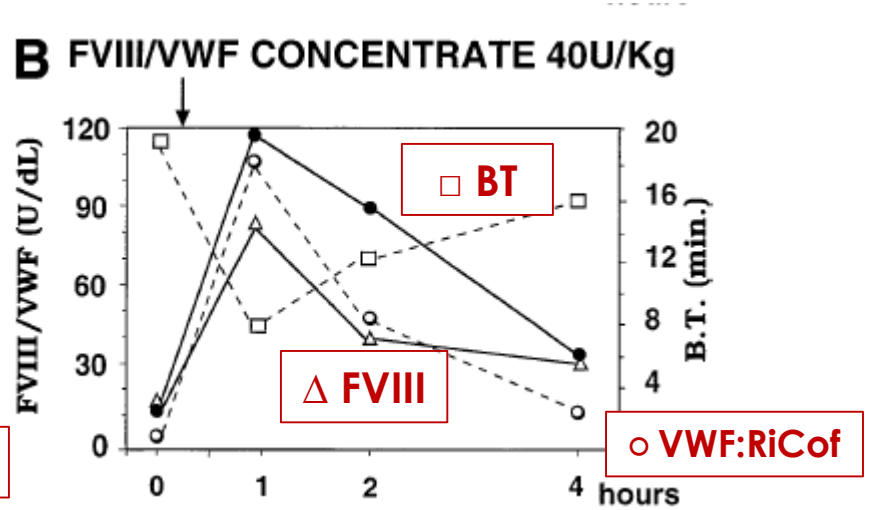
Concentrati di fattore (Haemate-P)

- ✓Rapida risposta
- ✓Perdita efficacia in tempi brevi
- ✓Per definizione sono pazienti con rapida *clearance* di vWF
- ✓Buona % risposta (intorno al 30% pazienti non stratificati)
- ✓Meno efficace nei pazienti con malattie mieloproliferative e cardiologiche

MGUS Ig-G



MGUS Ig-M



Federici A et al. Blood 1998;92: 2707-2711

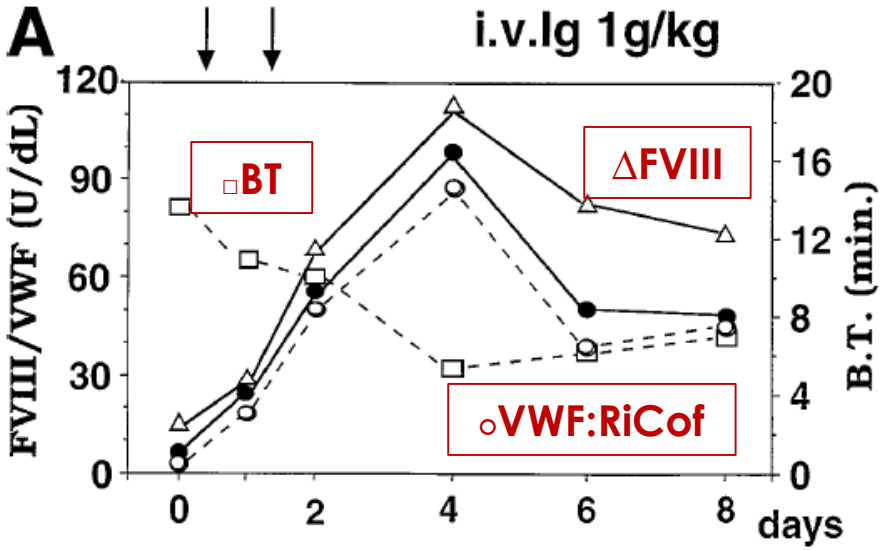
IVIg

- ✓Necessitano di **12-36 ore** per incrementare significativamente i valori di vWF
- ✓Effetto mantenuto più a lungo (fino a 7-9 gg)
- ✓Efficace in più di 1/3 dei pazienti
- ✓Diverse posologie proposte
  - 0.4 g/kg/die per 5 giorni
  - 1 g/kg/die per 2 giorni
  - 2 g/kg in monosomministrazione
  - Mantenimento con 0.5-1 g/kg ogni 21 giorni

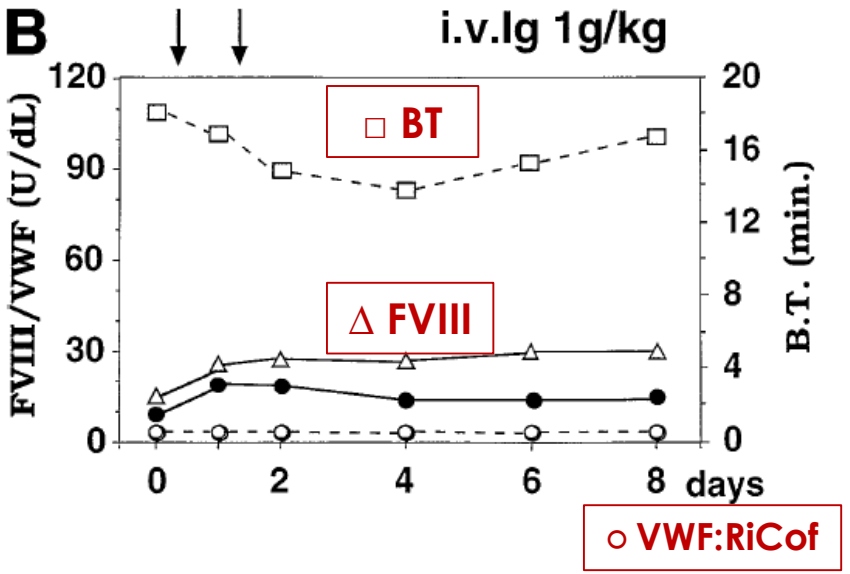
IV Ig

- ✓ **Inefficaci** in pazienti con patologie mieloproliferative, cardiologiche e **MGUS di tipo IgM**
- ✓ Più efficaci rispetto altri trattamenti nei pazienti con Ac inibitori

MGUS Ig-G



MGUS Ig-M



Federici A et al. Blood 1998;92: 2707-2711

Blood Transfus 2015; 13; 498-513

Acquired inhibitors of clotting factors: AICE recommendations for diagnosis and management

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The treatment of bleeding manifestations in patients with AHA, AVWS and inhibitors of other clotting factors must be guided by taking into account the following recommendations:

- Not all patients manifest clinically relevant bleeding when an acquired inhibitor develops/is diagnosed. In such cases treatment with haemostatic agents may not be required and the patients may be managed conservatively adopting a "wait and watch" approach **(Grade 2C recommendation)**.
- When possible, the removal of the condition that probably triggered the development of the inhibitor (e.g. cancer, drugs) should be the priority, since this can lead to the disappearance/reduction of the inhibitor **(Grade 2C recommendation)**.

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- DDAVP or FVIII/VWF concentrates are indicated for the treatment of minor bleeding in patients with AVWS. The levels of FVIII and VWF should be monitored after the treatment because the half-lives of these clotting factors can be very short in patients with acquired inhibitor antibodies **(Grade 2C recommendation)**.

Acquired inhibitors of clotting factors:

For patients with acquired inhibitors against other clotting factors, and for patients with AVWS, the following recommendations concerning immunosuppressive treatment can be made:

- The use of immunosuppressive therapy is not always indicated, since many inhibitors are transient and do not cause significant bleeding. In selected cases a "wait and watch" approach may be indicated, taking into account that the resolution of a concomitant neoplastic or autoimmune disease can give rise to spontaneous remission of the inhibitor **(Grade 2C recommendation)**. In particular, treatment of the underlying disease must be considered the first approach in patients with AVWS and antibody inhibitors **(Grade 1C recommendation)**.

*Blood Transfus 2015; **13**; 498-513*

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- If bleeding symptoms prompt starting immunosuppressive therapy, the same criteria defined for patients with AHA can be applied **(Grade 2C recommendation)**.

*Blood Transfus 2015; **13**; 498-513*

Acquired inhibitors of clotting factors:

- If immunosuppressive therapy is not indicated or the antibody persists, especially if belonging to IgG class, treatment with HDIg should be considered. The response to treatment should, however, be monitored and, if positive, its duration assessed by a test infusion of HDIg (1 g/kg/die for 2 days or 400 mg/kg/die for 5 days), measuring FVIII and VWF levels at least 1, 7 and 15 days after the end of the first cycle of treatment. Furthermore, the treatment should be prolonged, usually being administered at intervals of about 21 days (even only 1 g/kg/die), especially in patients in whom the risk of bleeding remains high (e.g., in patients with gastrointestinal bleeding due to angiodysplasia) **(Grade 2C recommendation)**.

Blood Transfus 2015; 13; 498-513

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- ✓Inhibitors **against FV** are the most frequent among the inhibitors against the other clotting factors.
- ✓In most cases these inhibitors develop in association with identifiable risk factor, such as a surgical intervention, antibiotics (particularly beta lactams and aminoglycosides), blood transfusions, malignancies and autoimmune diseases.
- ✓ Cases of AFVD were described following the use of topical haemostatic agents containing bovine thrombin and traces of bovine FV able to stimulate an immune response also crossreacting with human FV.

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U.L.SS. N. 6 "VICENZA"
DIVISIONE DI EMATOLOGIA
CENTRO REGIONALE PER LO STUDIO
DELLE MALATTIE EMORRAGICHE E TROMBOTICHE
Primario: Prof. Francesco Rodeghiero
Reparto - Tel. 0444/75.3518 - Fax 0444/75.3365
CMET - Tel. 0444/75.3679 - Fax 0444/75.3922

Vicenza, 08/07/2013

Egregio Dr. ANDERLINI UGO, Le invio l'esito della visita al Suo assistito effettuata il 21/06/2013.

Esami

Globuli bianchi	5.84	mila/µl	(V.N. 4 - 10)
Globuli rossi	4.86	milioni/µl	(V.N. 4.5 - 6.3)
Emoglobina	14.0	g/dl	(V.N. 12 - 16)
Ematocrito	41.1	%	(V.N. 37 - 51)
MCV	84.6	fl	(V.N. 80 - 96)
Piastrine	202	mila/µl	(V.N. 130 - 400)
Proteine ETF, siero	all.		(V.N.)
Dosaggio Ig sieriche	all.		(V.N.)
PT	1.06	Ratio	(V.N. 0.8 - 1.2)
PTT	1.44	Ratio	(V.N. 0.8 - 1.2)
PTT prova crociata imm.	1.1	Ratio	(V.N. 0.8 - 1.2)
Fibrinogeno PT-der	290	mg/dl	(V.N. 200 - 450)
FVIII attiv.	14	UI/dl	(V.N. 60 - 130)
vWF:Ag plasmatico	12	UI/dl	(V.N.)
vWF:RiCof plasmatico	3	UI/dl	(V.N.)
Tempo di chiusura PFA-ADP	>300	sec	(V.N.)
Tempo chiusura PFA-Epinef	>300	sec	(V.N.)

Conclusioni

Si conferma la malattia di von Willebrand. Sulla base dell'anamnesi non è possibile concludere con certezza se la forma sia congenita o acquisita in corso di paraproteina. Si suggerisce l'esecuzione di test con desmopressina per valutarne la risposta ai fini terapeutici ed eventuale analisi dell'emivita dopo infusione di Concentrato di FVIII/fattore von Willebrand. Se specialmente dopo infusione di concentrato l'emivita risultasse molto breve, andrà presa in considerazione la diagnosi di malattia di von Willebrand acquisita. Si ricorda che in questo caso l'infusione di Ig è stata dimostrata indurre una normalizzazione dei livelli di FVIII e fattore von Willebrand. Si rimane a disposizione per ogni necessità e discussione del caso con i colleghi del centro di Modena.
Cordiali saluti.

Il Medico dell' Ambulatorio
DR. CASTAMAN GIANCARLO

OSPEDALE
SAN RAFFAELE

Diagnosi alla dimissione

Neoplasia prostatica (in attesa di esame istologico) in paziente noto per malattia di von Willebrand.

Motivo del Ricovero

Paziente noto per adenocarcinoma prostatico, candidato a intervento di prostatectomia radicale robot-assistita (RARP).

Cenni Anamnestici

ALLERGIE: Punture di insetti, pregressa allergia alle graminacee. Sospetta allergia alle cefalosporine (edema di Quinke).
TERAPIA CRONICA: Irbesartan

APR:
- IPA
- Malattia di von Willebrand (bleeding score di 6), diagnosticata nel 2011 in seguito a intervento dermatologico
- Ernioplastica inguinale bilaterale laparoscopica nel 2011
- Biopsie prostatiche nel 2012 (negative per neoplasia)
- Frenuloplastica nel 2015

Decorso Clinico - Iter Diagnostico Terapeutico

Su parere coagulologico (Dr. Crippa), un'ora prima dell'intervento chirurgico venivano somministrate 5000U di Wilfactin e 2000 U di fattore VIII. Nell'immediato post-operatorio, sempre su parere coagulologico, veniva iniziata terapia con Wilfactin (200 U/h) e immunoglobuline (90 g/die). In relazione agli esami ematici, si procedeva successivamente a interruzione della terapia prima con immunoglobuline (11/02/2016) e successivamente con Wilfactin (12/02/2016). In data 12/02/2016, su parere coagulologico, si impostava terapia con Clexane 4000 UI.

OSPEDALE SAN RAFFAELE
ISTITUTO DI RICOVERO E CURA A CARATTERE SCIENTIFICO

Ambulatorio di Emostasi e Trombosi – Unità di Ricerca Trombosi
Centro per la Sorveglianza del paziente Anticoagulato
Responsabile Dr. Armando D'Angelo
tel. 0226437011 – 0226437007 - 0226433642

In particolare il paziente è stato trattato preoperatoriamente con concentrato di fattore di von Willebrand (Wilfactin 5000 U) e concentrato di fattore VIII (Haemate P 2000 U), poi nell'immediato post operatorio, sulla base dei test emocoagulativi e della valutazione del rischio emorragico, ha proseguito con l'infusione di Wilfactin (3000 U in bolo e a seguire 200 U/ora in infusione continua) a cui è stata associata anche l'infusione di immunoglobuline ad alte dosi (180 gr suddivisi in due giorni).

Quotidianamente, per tutto il periodo post operatorio, in base alle condizioni cliniche del paziente e ai test emocoagulativi (eseguiti due volte al giorno), veniva decisa la prosecuzione o meno della terapia infusionale sostitutiva con Wilfactin.

Il Wilfactin è stato praticato in infusione continua fino alla terza giornata post operatoria allorquando raggiunti dei livelli emostatici rigorosamente normali è stato sospeso ed è stata eseguita, oltre all'elastocompressione degli arti inferiori, una profilassi antitrombotica con enoxaparina (paziente portatore di varici degli arti inferiori).

...dipende...

E' la cima che determina i fianchi…

Mentre prendeva (le rose) si punse il dito con una spina del gambo, ma risolse la situazione con un espediente affascinante. "L'ho fatto apposta" disse, "affinché si notasse il mio anello." (…)

La puntura era quasi invisibile. Tuttavia appena tornati in macchina riprese a sanguinare, sicché Nena Daconte lasciò il braccio penzolante fuori dal finestrino, convinta che l'aria glaciale dei vivai avesse virtù cauterizzanti. (…)

Non ebbe il tempo di ripensarci.

Ai sobborghi di Parigi, il dito era una sorgente incontenibile, e lei sentì davvero che l'anima stava uscendole dalla ferita.

Gabriel Garcìa Màrquez

La traccia del tuo sangue sulla neve - Dodici racconti raminghi

Una Nena Da Conte (quasi…) dei nostri giorni

- ✓ La signora NDC, 32 aa, secondipara, viene sottoposta a TC in elezione.
- ✓ Perdite intraoperatorie riportate “+++”.
- ✓ Rimpiazzo volemico con 2500 cc di cristalloidi e colloidi.
- ✓ Emocromo urgente a fine intervento: Hb 6.9, con valori piastrinici ancora mantenuti
- ✓ Evidente sanguinamento dall’utero, per cui si decide di somministrare uterotonici (2 fiale di Prostin intramiometrio).

Definizioni di EPP

	DEFINIZIONE	CRITERI	
OMS	**EPP**	PERDITA ematica >500 ml dopo il parto	
	EPP GRAVE	PERDITA ematica >1000 ml dopo il parto	
RCOG	**EPP MINORE**	PERDITA ematica > 500 ml dopo parto per via vaginale (1000 ml dopo taglio cesareo)	
	EPP MAGGIORE	Perdita ematica >1000 ml dopo parto per via vaginale	**MODERATA Perdita ematica 1000-2000 ml**
			GRAVE Perdita ematica < 2000 ml

LINEA GUIDA SU PREVENZIONE E TRATTAMENTO DELL'EMORRAGIA DEL POST-PARTUM

- EPP **minore** in caso di perdita ematica stimata tra 500 e 1.000 mL;
- EPP **maggiore** in caso di perdita ematica stimata >1.000 mL

La EPP maggiore a sua volta è distinta in due condizioni di diversa gravità che comportano un'allerta e una prognosi diversificate:

- EPP **maggiore controllata** in caso di perdita ematica controllata con compromissione delle condizioni materne che richiede un monitoraggio attento;
- EPP **maggiore persistente** in caso di perdita ematica persistente e/o segni di shock clinico con una compromissione delle condizioni materne che comporta un pericolo immediato per la vita della donna.

Una nostra Nena Da Conte (quasi…)

- ✓ La signora NDC, 32 aa, secondipara, viene sottoposta a TC in elezione.
- ✓ Perdite intraoperatorie riportate “+++”.
- ✓ Rimpiazzo volemico con 2500 cc di cristalloidi e colloidi.
- ✓ Emocromo urgente a fine intervento: Hb 6.9, con valori piastrinici ancora mantenuti
- ✓ Evidente sanguinamento dall’utero, per cui si decide di somministrare uterotonici (2 fiale di Prostin intramiometrio).

Royal College of Obstetricians and Gynaecologists

Setting standards to improve women's health

Green-top Guideline
No. 52
May 2009
Minor revisions November 2009 and April 2011

Fluid therapy and blood product transfusion (please refer to sections 6.2.1 and 6.2.2):

Crystalloid	**Up to 2 litres Hartmann's solution**
Colloid	**up to 1–2 litres colloid until blood arrives**
Blood	**Crossmatched** **If crossmatched blood is still unavailable, give uncrossmatched group-specific blood OR give 'O RhD negative' blood**
Fresh frozen plasma	**4 units for every 6 units of red cells or prothrombin time/activated partial thromboplastin time > 1.5 x normal (12–15 ml/kg or total 1 litres)**
Platelets concentrates	**if PLT count < 50 x 109**
Cryoprecipitate	**If fibrinogen < 1 g/l**

Una Nena Da Conte (quasi…) dei nostri giorni

- ✓ Nuovi esami di laboratorio:
  - Hb 5.8 g/dl
  - Plt 103.000
  - INR 1.66
  - APTT non coagulabile
  - Fibrinogeno 163.9 mg/dl
- ✓ Richieste 6 U di EC e 3 U di PFC

Una Nena Da Conte (quasi…) dei nostri giorni

- ✓ Prima di aver completato l'infusione delle une e delle altre i Medici decidono di procedere all' isterectomia, attribuendo la causa del sanguinamento ad una CID.
- ✓ La paziente si salva, ma promuove un'azione legale per lesioni personali nei confronti dei Ginecologi, ritenendo affrettata la decisione di procedere all'isterectomia.

Si faccia una domanda
e si dia una risposta...

✓NDC aveva davvero una **CID**?

OFFICIA

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C. H. TOH
COAGULA

Table 1 Scoring system for overt Disseminated Intravascular Coagulation (DIC)

1. Risk assessment: does the patient have an underlying disorder known to be associated with overt DIC?

   If yes: Proceed.

   If no: Do not use this algorithm.

2. Order global coagulation tests (platelet count, prothrombin time, fibrinogen, fibrin-related marker).

3. Score global coagulation test results.

- Platelet count
  (>100 = 0; <100 = 1; < 50 = 2)
- Elevated fibrin related marker (e.g. D-dimers; fibrin degradation products)
  (no increase = 0; moderate increase = 2; strong increase = 3)
- Prolonged prothrombin time
  (< 3 s = 0; > 3 but < 6 s = 1; > 6 s = 2)
- Fibrinogen level
  (>1.0g L^{-1} = 0; < 1.0g L^{-1} = 1)

0

?

2

0

5. Calculate score

If ≥ 5: compatible with overt DIC: repeat score daily

If < 5: suggestive (not affirmative) for non-overt DIC: repeat next 1–2 days.

04–6.

the
year

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April 2014 | Volume 9 | Issue 4 | e93240

PLOS ONE

DIC Score in Pregnant Women – A Population Based Modification of the International Society on Thrombosis and Hemostasis Score

Table 3. An effect of components of the new DIC score – results of logistic regression.

	Effect of individual analytes		Effect of individual analytes adjusted to other tests		Assigned Weight[1]
	Relative Risk	p-value	Relative Risk	p-value	
PT difference (seconds)					
<0.5	1.0		1.0		0
0.5–1	12.7	0.031	29.3	<0.001	5
1.0–1.5	27.7	0.005	68.8	<0.001	12
>1.5	60.3	<0.001	558.1	<0.001	25
Platelets (10^9/L)					
<50	3.1	0.06	89.2	<0.001	1
50–100	5.2	<0.001	56.2	<0.001	2
100–185	2.9	0.001	12.8	<0.001	1
>185	1.0		1.0		0
Fibrinogen (g/L)					
<3.0	59.0	<0.001	662.9	<0.001	25
3.0–4.0	13.4	<0.001	59.1	<0.001	6
4.0–4.5	2.4	0.320	6.8	0.03	1
>4.5	1.00		1.0		0

[1]Weight was calculated as relative risk of each of the adjusted factors to the relative risk of a factor with minimal effect.

doi:10.1371/journal.pone.0093240.t003

OPEN ACCESS Freely available online April 2014 | Volume 9 | Issue 4 | e93240 PLOS ONE

DIC Score in Pregnant Women – A Population Based Modification of the International Society on Thrombosis and Hemostasis Score

Offer Erez[1]*, Lena Novack[2], Ruthy Beer-Weisel[1], Doron Dukler[1], Fernanda Press[1], Alexander Zlotnik[3],

Principal findings of the study

1) pregnancy is associated with significant changes in the major components of the ISTH overt DIC score; 2) by using only three components of this score, platelet count, fibrinogen concentrations and the PT difference, we were able to construct a pregnancy modified DIC score that had an area the curve of 0.975 ($p<0.001$), and at a cutoff of ≥ 26 points had a sensitivity of 88% and a specificity of 96% for the diagnosis of DIC; and 3) at this cutoff the pregnancy modified DIC score had a positive likelihood ratio score of 22 and a negative likelihood ratio score of 0.125.

Si faccia una domanda
e si dia una risposta...

- ✓ **Come gestire una EPP?**
  - **Precondizioni per l'emostasi**
  - **PFC**
  - **Ac. Tranexamico**
  - **Fibrinogeno**

EPP con perdite ematiche fra 500 e 1000 ml, con stabilità emodinamica

1. *Valutare l' entità del sanguinamento*
2. *Valutare i parametri vitali*
3. *Valutare la pervietà delle vie aeree e della qualità della respirazione*
4. *Incannulare due accessi venosi di grosso calibro*
5. *Effettuare un'emogas arteriosa*
6. *Inserire un catetere vescicale*
7. *Evitare o correggere l'ipotermia*
8. *Evitare o correggere l'acidosi*
9. *Effettuare prelievi per emogruppo e test di laboratorio +/- POC*
10. *Attivare procedure per terapia trasfusionale*
11. *Esplorare utero e canale del parto*
12. *Somministrare Ossitocina*

EPP con perdite ematiche > 1000 ml, con instabilità emodinamica

TUTTE LE MISURE PRECEDENTI, PIU':

1. *Reintegrare la volemia con cristalloidi*
2. *Proseguire terapia trasfusionale e supporto emostatico*
3. *Utilizzare dispositivi per il riscaldamento e infusori rapidi*
4. *Garantire le precondizioni adeguate per l'emostasi (temperatura corporea >34°C, pH >7.2, Ca^{++} >1mmol/L)*
5. *Valutare trattamenti non farmacologici (chirurgia/radiologia interventistica)*

Quanto PFC?

- ✓15 ml/kg?
- ✓30 ml/kg?
- ✓PFC:EC 1:1?
- ✓PFC:EC >1:2?

An Observational Study of the Fresh Frozen Plasma: Red Blood Cell Ratio in Postpartum Hemorrhage

Pierre Pasquier, MD,* Etienne Gayat, MD, PhD,† Thibaut Rackelboom, MD,‡ Julien La Rosa, MD,‡ Abeer Tashkandi, MD,‡ Antoine Tesniere, MD, PhD,‡ Julie Ravinet, MD,§ Jean-Louis Vincent, MD, PhD,|| Vassilis Tsatsaris, MD, PhD,§ Yves Ozier, MD, PhD,* François Goffinet, MD, PhD,§ and Alexandre Mignon, MD, PhD,‡

(Anesth Analg 2013;116:155–61)

Propensity score analysis demonstrated that a **FFP:RBC ratio ≥0.5** was associated with **fewer requirements for advanced interventional procedures** (OR [95% CI], 1.25 [1.07–1.47]; *P* = 0.008) for the whole cohort, and for patients who received at least 1 U of FFP (OR [95% CI], 1.58 [1.19–2.10]; *P* = 0.003).

bozza

LINEA GUIDA SU PREVENZIONE E TRATTAMENTO DELL'EMORRAGIA DEL POST-PARTUM

Gli obiettivi di laboratorio predefiniti sono utili per orientare la gestione dell'emorragia maggiore, che deve essere orientata a mantenere:

- **concentrazione emoglobinica superiore a 8 g/dl**
- **conta piastrinica superiore a $50x10^9$/l**
- **PT ratio a meno dell'1,5 del normale**
- **APTT ratio a meno dell'1,5 del normale**
- **fibrinogenemia superiore a 2g/l**

LINEA GUIDA SU PREVENZIONE E TRATTAMENTO DELL'EMORRAGIA DEL POST-PARTUM

bozza

Raccomandazioni

- In caso di EPP maggiore in atto e qualora i test dell'emostasi non siano disponibili, dopo aver somministrato 4 unità di emazie infondere PFC alle dosi di 15-20 ml/kg.
  (raccomandazione di buona pratica clinica basata sull'esperienza del panel)

- In caso di test dell'emostasi alterati ed emorragia in atto si suggerisce di infondere plasma fresco congelato (15-20 ml/kg) con l'obiettivo di mantenere il tempo di protrombina (PT) ratio e tempo di tromboplastina parziale attivata (APTT) ratio a meno dell'1,5 del normale.
  (raccomandazione di buona pratica clinica basata sull'esperienza del panel)

- Non è necessaria una profilassi anti-D se una donna RhD negativa riceve plasma fresco congelato o crioprecipitati RhD positivi.
  (raccomandazione di buona pratica clinica basata sull'esperienza del panel)

- Si suggerisce di mantenere una concentrazione di fibrinogeno plasmatico superiore ai 2 g/l. E' possibile aumentare la concentrazione di fibrinogeno infondendo plasma fresco congelato, crioprecipitato o fibrinogeno concentrato*.
  (raccomandazione di buona pratica clinica basata sull'esperienza del panel)

*Il fibrinogeno concentrato non è registrato in Italia per questo uso

LINEA GUIDA SU PREVENZIONE E TRATTAMENTO DELL'EMORRAGIA DEL POST-PARTUM

bozza

Raccomandazioni

- In corso di EPP si suggerisce di trasfondere concentrati piastrinici (*1 unità random ogni 10 kg di peso o equivalente da donatore unico)* in presenza di conte piastriniche inferiori a $75x10^9$l.
  (raccomandazione di buona pratica clinica basata sull'esperienza del panel)

- I concentrati piastrinici trasfusi idealmente dovrebbero essere omogruppo. Se una donna RhD negativa riceve piastrine RhD positive è necessaria una profilassi anti-D.
  (raccomandazione di buona pratica clinica basata sull'esperienza del panel)

Raccomandazione

- In presenza di EPP non responsiva ai trattamenti farmacologici di prima e seconda linea valutare la somministrazione di acido tranexamico.
  (raccomandazione debole, prove di qualità bassa)

Raccomandazione

In presenza di EPP grave e persistente, non responsiva ai trattamenti farmacologici di prima e seconda linea e alle procedure/interventi chirurgici, valutare l'utilizzo del rFVIIa quale opzione adiuvante nel rispetto di protocolli condivisi o con la diretta consulenza di medici esperti in patologie della coagulazione.
(raccomandazione debole, prove di qualità bassa)

Wikkelsoe *et al. Trials* 2012, **13**:110
http://www.trialsjournal.com/content/13/1/110

TRIALS

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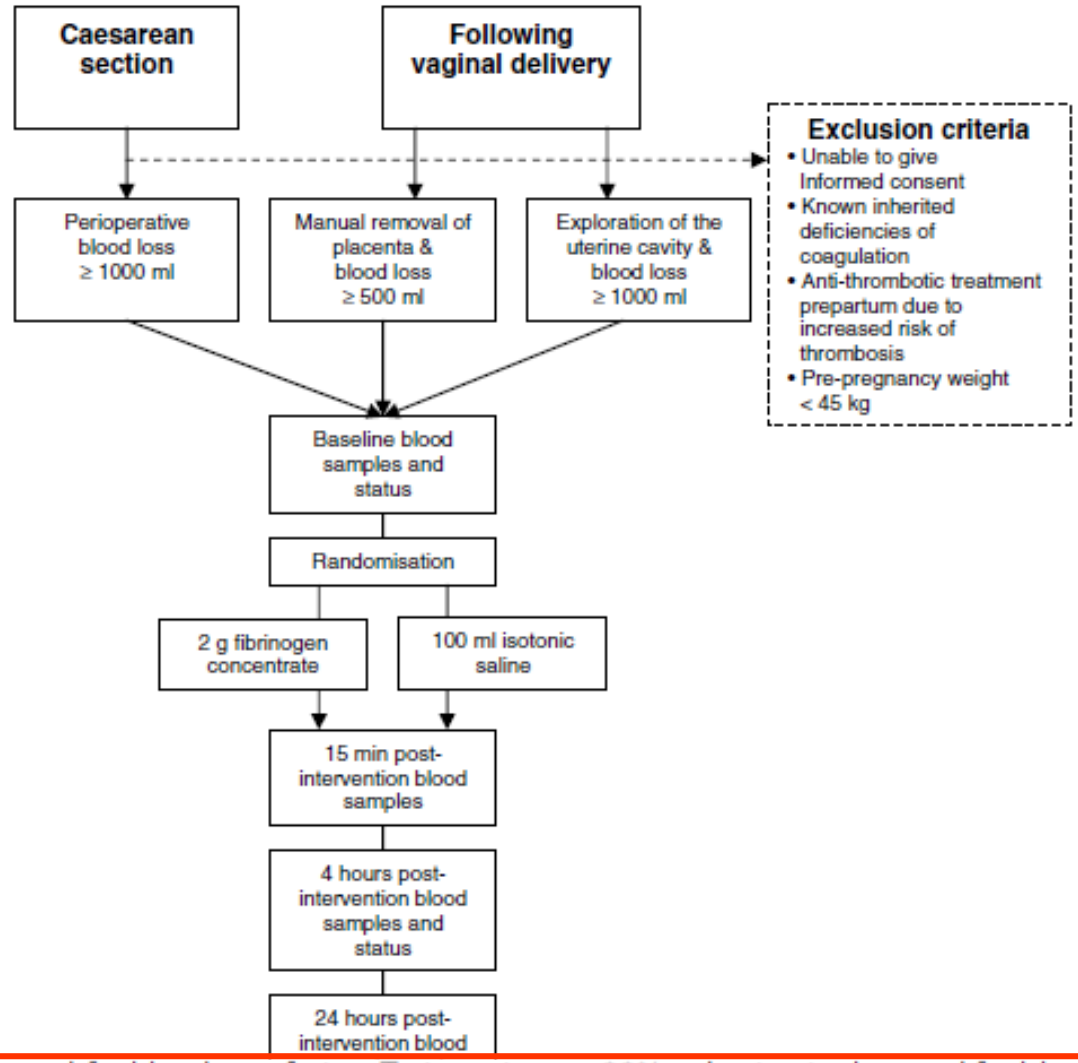
Anne
Kim E
Lars M



Primary outcome is the need for blood transfusion. To investigate a 33% reduction in the need for blood transfusion, a total of 245 patients will be included. Four university-affiliated public tertiary care hospitals will include patients during a two-year period. Adverse events including thrombosis are assessed in accordance with International Conference on Harmonisation (ICH) good clinical practice (GCP).

Mai più Nena Da Conte

- ✓ Quantificare perdite
- ✓ Attivare subito tutte le risorse disponibili
- ✓ Pochi fluidi
- ✓ Evitare ipotermia/acidosi
- ✓ SE EMORRAGIA CRITICA, **PFC:EC:CP = 1:1:1**
- ✓ **Ac TRANEXAMICO 1 gr in 10 min, poi 1 gr in 8 ore**
- ✓ Fibrinogeno se valore < 200 mg/dl (?)

E' la cima che determina i fianchi…

Dimensione del problema

ORIGINAL ARTICLE

Bleeding risk in randomized controlled trials comparing warfarin and aspirin: a systematic review and meta-analysis

J Thromb Haemost 2012; **10**: 512–20.

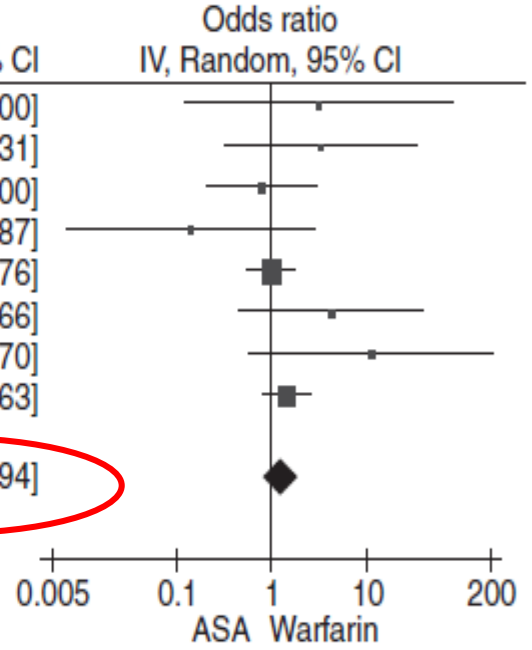
A. E. WARKENTIN,* M. P. DONADINI,† F. A. SPENCER,† W. LIM† and M. CROWTHER†

MAJOR BLEEDING

Study or subgroup	Warfarin Events	Total	ASA Events	Total	Weight	Odds ratio IV, Random, 95% CI
Huynh *et al*, 2001 [14]	1	45	0	46	1.7%	3.13 [0.12–79.00]
Colli *et al*, 2007 [15]	3	34	1	35	3.3%	3.29 [0.32–33.31]
Gullov *et al*,1999 [16]	4	170	5	169	9.6%	0.79 [0.21–3.00]
Rash *et al*, 2007 [17]	0	36	3	39	2.0%	0.14 [0.01–2.87]
Mant *et al*, 2007 [18]	25	488	25	485	40.1%	0.99 [0.56–1.76]
Cleland *et al*, 2004 [19]	4	89	1	91	3.6%	4.24 [0.46– 38.66]
Cokkinos *et al*, 2006 [20]	4	53	0	61	2.1%	11.18 [0.59–212.70]
Massie *et al*, 2009 [21]	28	540	19	523	37.6%	1.45 [0.80–2.63]
Total (95% CI)		1455		1449	100.0%	1.27 [0.83–1.94]
Total events	69		54			

Heterogeneity: $Tau^2 = 0.03$, $Chi^2 = 7.61$, d.f. = 7 ($P = 0.37$); $I^2 = 8\%$

Test for overall effect: $Z = 1.09$ ($P = 0.28$)



4.74%

3.72%

Fig. 2. Risk of major bleeding in patients [illegible] as [illegible] acid) (ASA). CI, confidence interval; d.f., degrees of freedom; IV, inverse variance.

EJA

Eur J Anaesthesiol 2013; **30:**270–382

GUIDELINES

Management of severe perioperative bleeding

Guidelines from the European Society of Anaesthesiology

Sibylle A. Kozek-Langenecker, Arash Afshari, Pierre Albaladejo, Cesar Aldecoa Alvarez Santullano,

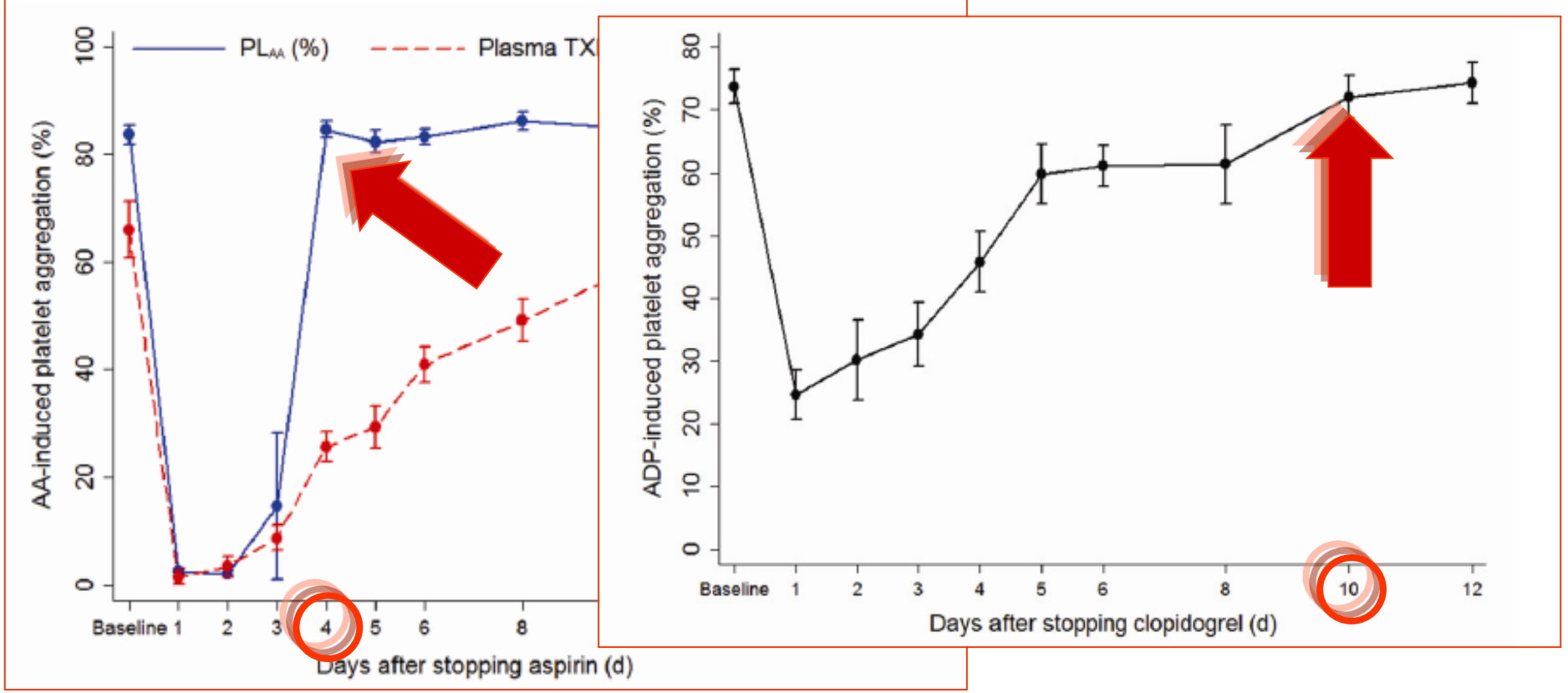
Recommendation

We suggest that platelet transfusion should be considered (dose: 0.7 x 10^{11} [i.e. two standard concentrates] per 7 kg body weight in adults) in cases of intra- or postoperative bleeding clearly related to clopidogrel or prasugrel. **2C**

Reversal of the anti-platelet effects of aspirin and clopidogrel

Chun-jian Li MD PhD,* Jack Hirsh MD,† Changchun Xie MD,‡ Marilyn A Johnston,§ John W Eikelboom, MBBS¶

Accepted for publication in the *Journal of Thrombosis and Haemostasis*
doi: 10.1111/j.1538-7836.2012.04641.x

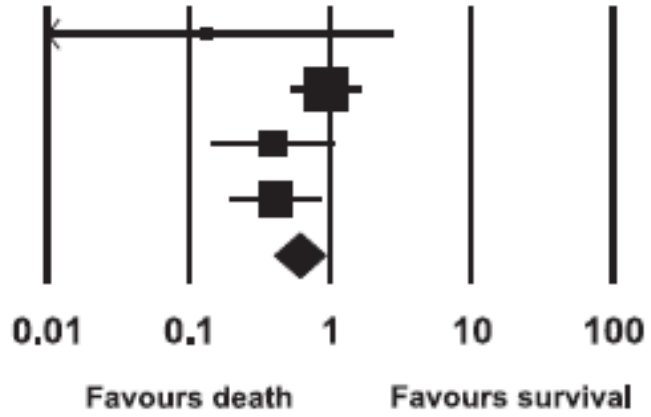


A meta-analysis to determine the effect on survival of platelet transfusions in patients with either spontaneous or traumatic antiplatelet medication-associated intracranial haemorrhage

John S Batchelor, Alan Grayson

BMJ Open 2012;**2**:e000588.

Study name	OR	Lower limit	Upper limit	Z Value	p Value
Washington *et al*[10]	0.132	0.006	2.813	−1.298	0.194
Downey *et al*[11]	0.945	0.531	1.680	−0.193	0.847
Ivascu *et al*[14]	0.395	0.148	1.060	−1.844	0.065
Fortuna *et al*[15]	0.408	0.194	0.859	−2.359	0.018
	0.609	0.404	0.917	−2.376	0.018



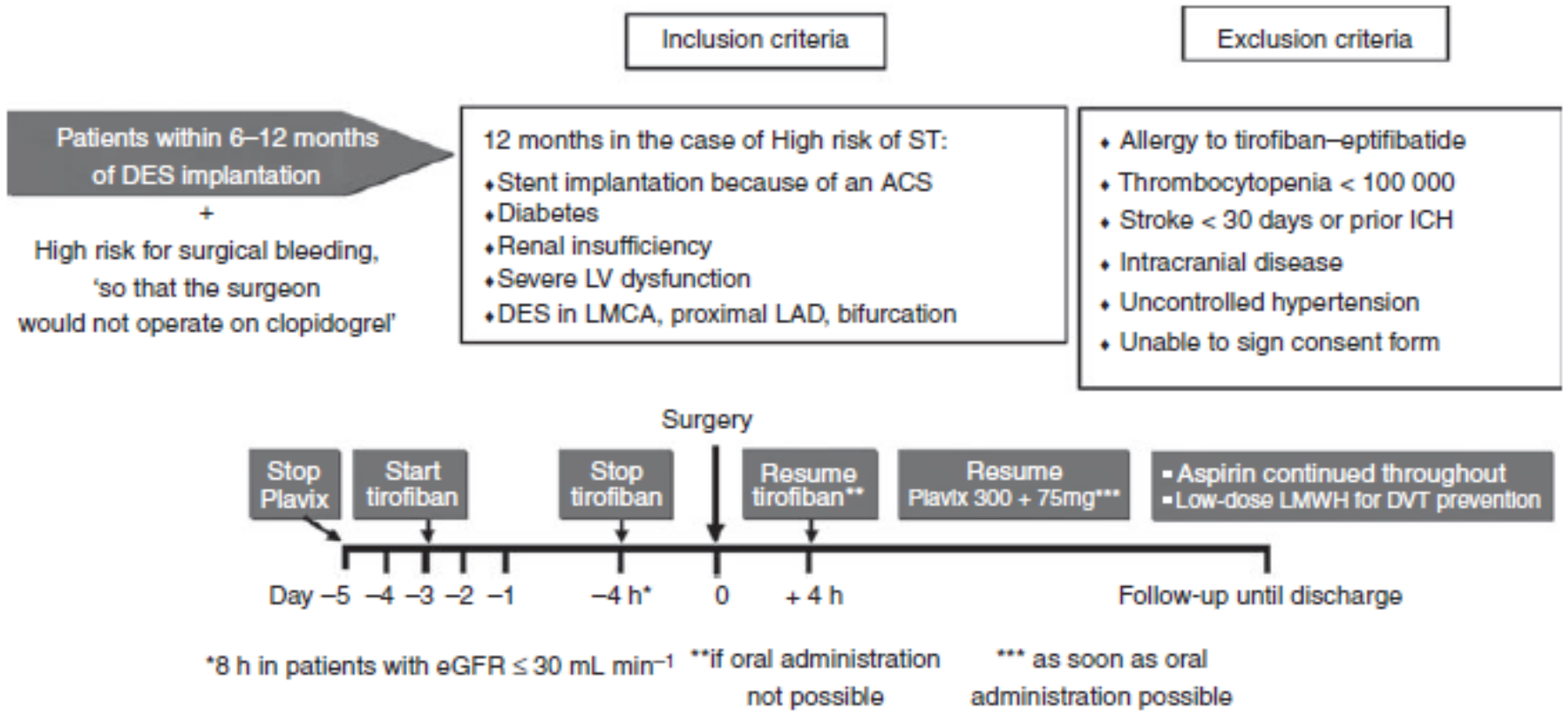
Post-traumatica

REVIEW ARTICLE

Management of patients with recently implanted coronary stents on dual antiplatelet therapy who need to undergo major surgery

J Thromb Haemost 2011; **9**: 2133–42.

S. SAVONITTO,* M. CARACCIOLO,* M. CATTANEO† and S. DE SERVI‡



"And all this science, I don't understand
its' just my job, five days a week... "

22/01/2015

✓Si ricovera in data odierna la Sig.ra AZPLMO 159999, di anni 34, per nuova diagnosi di leucemia acuta promielocitica.

✓La Sig.ra è attualmente alla ottava settimana di gestazione, non riferisce allergie, né precedenti di rilievo.

✓Agli esami ematici odierni: GB 1.420/mmc, Hb 11.5 gr/dl, **Plt 109.000/mmc, PT ratio 1.18, fibrinogeno 132 mg/dl, D-dimero 11280 ng/ml.**

Si faccia una domanda
e si dia una risposta...

AZPLMO 159999 aveva una **CID**?

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COAGULA

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year

Table 1 Scoring system for overt Disseminated Intravascular Coagulation (DIC)

1. Risk assessment: does the patient have an underlying disorder known to be associated with overt DIC?

   If yes: Proceed.

   If no: Do not use this algorithm.

2. Order global coagulation tests (platelet count, prothrombin time, fibrinogen, fibrin-related marker).

3. Score global coagulation test results.

- Platelet count
  (>100 = 0; <100 = 1; < 50 = 2) ☐
- Elevated fibrin related marker (e.g. D-dimers; fibrin degradation products)
  (no increase = 0; moderate increase = 2; strong increase = 3) ☐
- Prolonged prothrombin time
  (< 3 s = 0; > 3 but < 6 s = 1; > 6 s = 2) ☐
- Fibrinogen level
  (>1.0g L^{-1} = 0; < 1.0g L^{-1} = 1) ☐

5. Calculate score ☐

   If ≥ 5: compatible with overt DIC: repeat score daily

   If < 5: suggestive (not affirmative) for non-overt DIC: repeat next 1–2 days.

 doi:10.1111/j.1365-2141.2009.07600.x

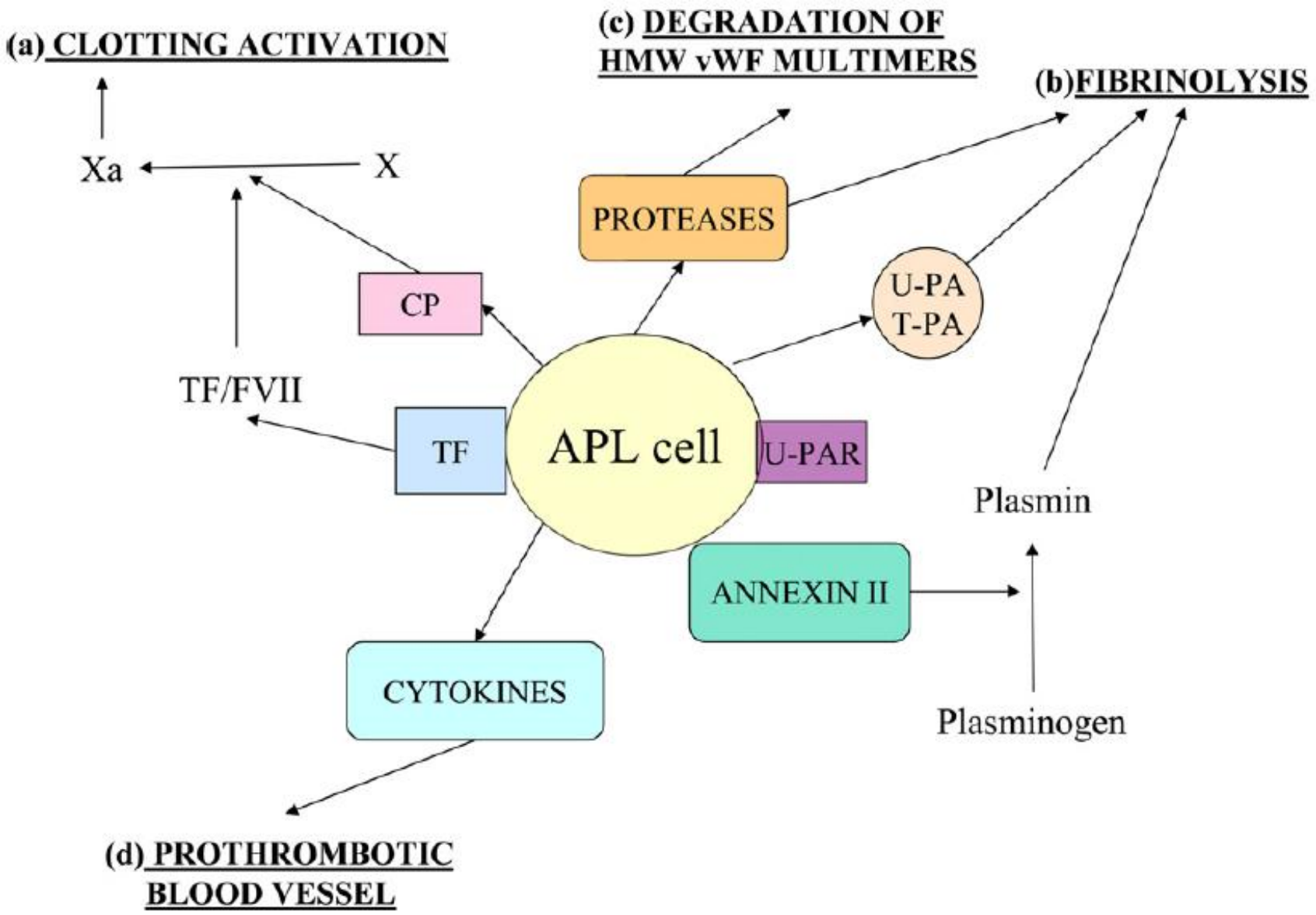
bjh british journal of haematology

Guidelines for the diagnosis and management of disseminated intravascular coagulation

M. Levi[1]
C. H. Toh[2]
J. Thachil[2]
H. G. Watson[3]

Table I. Conditions associated with DIC.

Sepsis and severe infection
Trauma
Organ destruction e.g pancreatitis
Malignancy
Solid tumours
Leukaemia
Obstetric
Amniotic fluid embolism
Placental abruption
Pre-eclampsia
Vascular abnormalities
Large haemangiomata
Vascular aneurysm
Severe liver failure
Toxic and immunological insults
Snake bites
Recreational drugs
ABO transfusion incompatibility
Transplant rejection



Breen K, BJH 2011

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year

Table 1 Scoring system for overt Disseminated Intravascular Coagulation (DIC)

1. Risk assessment: does the patient have an underlying disorder known to be associated with overt DIC?

   If yes: Proceed.

   If no: Do not use this algorithm.

2. Order global coagulation tests (platelet count, prothrombin time, fibrinogen, fibrin-related marker).

3. Score global coagulation test results.

- Platelet count
  (>100 = 0; <100 = 1; < 50 = 2) ☐ 0
- Elevated fibrin related marker (e.g. D-dimers; fibrin degradation products)
  (no increase = 0; moderate increase = 2; strong increase = 3) ☐ 3
- Prolonged prothrombin time
  (< 3 s = 0; > 3 but < 6 s = 1; > 6 s = 2) ☐ 0
- Fibrinogen level
  (>1.0g L^{-1} = 0; < 1.0g L^{-1} = 1) ☐ 0

5. Calculate score ☐

If ≥ 5: compatible with overt DIC: repeat score daily

If < 5: suggestive (not affirmative) for non-overt DIC: repeat next 1–2 days.

 British Journal of Haematology, **156**, 24–36

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Karen A. Breen,

Table II. Comparison of commonly used markers of haemostasis in disseminated intravascular coagulation, hyperfibrinolysis and APML.

Marker	DIC	Hyperfibrinolysis	APML
PT	↔ (usually ↑)	↑ or ↔	↔ (usually ↑↑)
aPTT	↔ (usually ↑)	↑ or ↔	↔ (usually ↑↑)
Fibrinogen	↓↓	↓↓↓	↓ (↓↓ if hyperfibrinolysis)
FDP	↑	↑↑	↑↑
D-Dimers	↑	↑↑	↑↑
Protein C	↓	↔	↔
Protein S	↓	↔	↔
Antithrombin	↓	↔	↔
Platelets	↓↓	↓	↓

↑ elevated, ↑↑ markedly elevated, ↔ no change, ↓ decreased, ↓↓ markedly decreased.

DIC, disseminated intravascular coagulation; APML, acute promyelocytic leukaemia; PT, prothrombin time; aPTT, activated partial thromboplastin time.

J Thromb Haemost 2015; DOI:10.1111/jth.12838.

Management of cancer-associated disseminated intravascular coagulation: guidance from the SSC of the ISTH

J. THACHIL,* A. FALANGA,† M. LEVI,‡ H. LIEBMAN§ and M. DI NISIO¶**

Table 1 Types of cancer-related DIC and their features

	Procoagulant	Hyperfibrinolytic	Subclinical
Predominant types of cancer	Pancreatic cancer, adenocarcinoma	Acute promyelocytic leukemia, metastatic prostate cancer	Many solid cancers
Predominant clinical symptom	Thrombosis	Bleeding	Neither
Different clinical presentations	Features of arterial ischemia, which can manifest as uneven, patchy discoloration of the skin, symptoms of poor digital circulation, cerebrovascular manifestations, peripheral neuropathy and ischemic colitis Venous thrombosis or pulmonary embolism An unusual form of non-infectious endocarditis has been noted to be a manifestation of cancer-related DIC	Widespread bruising, bleeding from mucosal surfaces, central nervous system, lungs, gastrointestinal tract and from sites of trauma Hemorrhage is the most common cause of induction mortality in acute promyelocytic leukemia, while catastrophic bleeding can occur before the diagnosis is made in some cases.	Only laboratory abnormalities, but no obvious clinical symptoms or signs of coagulation activation or fibrinolysis These abnormalities may include thrombocytopenia, hypofibrinogenemia and microangiopathic hemolytic anemia These features may remain long-standing due to the continuous thrombin generation as part of DIC, but may worsen or improve depending on the underlying malignancy
Treatment	That of underlying cancer Anticoagulation with heparin	That of underlying cancer Supportive care with blood products	That of underlying cancer Anticoagulation with heparin

22/01/2015

✓Visto il quadro laboratoristico di CID, si dispone per **trasfusione di plasma fresco congelato (900 ml).**

✓Inizia da stasera trattamento con ATRA e steroide.

Si faccia una domanda
e si dia una risposta...

PFC?

J Thromb Haemost 2015; DOI:10.1111/jth.12838.

Managemen[illegible]ravascular coagulation

J. THACHIL,* A. F[illegible]

Guidance statement

1 In patients with DIC and active bleeding, we suggest the use of platelet transfusion to maintain the platelet count above 50×10^9 L^{-1}.

2 In patients with DIC who are at high risk of bleeding (e.g. surgery or invasive procedures), we suggest that one to two doses of platelets (commonly from five donors or equivalent) are transfused, if the platelet count is less than 30×10^9 L^{-1} in APL, and less than 20×10^9 L^{-1} in other cancers.

3 In patients with DIC and active bleeding, we suggest transfusion of fresh frozen plasma (15–30 mL kg^{-1}) with careful clinical monitoring to decide on dose adjustments. In the case of concerns over volume overload, we suggest the use of prothrombin complex concentrates.

4 In actively bleeding cases with persistently low fibrinogen values (below 1.5 g L^{-1}) despite these supportive measures, we suggest transfusion of two pools of cryoprecipitate (whenever available) or fibrinogen concentrate.

J Thromb Haemost 2013; **11**: 761–7.

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H. WADA
H.K. KIM,
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Recommendations:

1 The transfusion of platelets is recommended in DIC patients with active bleeding and a platelet count of $< 50 \times 10^9$ L^{-1} or in those with a high risk of bleeding and a platelet count of $< 20 \times 10^9$ L^{-1} (low quality).

2 The administration of FFP may be useful in patients with active bleeding with either prolonged PT/APTT (> 1.5 times normal) or decreased fibrinogen (< 1.5 g dL^{-1}). It should be considered in DIC patients requiring an invasive procedure with similar laboratory abnormalities (low quality).

3 The administration of fibrinogen concentrate or cryoprecipitate may be recommended in actively bleeding patients with persisting severe hypofibrinogenemia (< 1.5 g L^{-1}) despite FFP replacement (low quality).

4 Prothrombin complex concentrate (PCC) may be considered in actively bleeding patients if FFP transfusion is not possible.

Curr Oncol, Vol. 21, pp. 234-250; doi: http://dx.doi.org/10.3747/co.21.2183

PRACTICE GUIDELINE

A Canadian consensus on the management of newly diagnosed and relapsed acute promyelocytic leukemia in adults

M.D. Seftel MD MBChB MPH,* *M.J. Barnett* MD BMBS,† *S. Couban* MD,‡ *B. Leber* MD,§ *J. Storring* MD CM,|| *W. Assaily* PhD,# *B. Fuerth* MSc,# *A. Christofides* MSc RD,# *and A.C. Schuh* MD*

TABLE II Recommendations for supportive care in newly diagnosed or suspected acute promyelocytic leukemia (APL)

	Supportive care	*Implementation*	*Target*
1	Frequent, aggressive transfusions	Cryoprecipitate Platelets Fresh-frozen plasma	Fibrinogen levels should be greater than 1.5 g/L Platelet counts should be at least 30×10^9/L
2	Therapy with ATRA	Should be started immediately	Should be administered in divided doses Purpose is to treat coagulopathy and to initiate induction
3	Frequent monitoring	Immediate	Every 6 hours

ATRA = all-trans-retinoic acid.

23/01/2015

Agli esami ematici del mattino:

GB 1.360/mmc, Hb 9.5 g/dl, Plt 76.000/mmc, fibrinogeno 161 mg/dl, D-dimero 19.230, AT 83%

Va in sala per IVG

J Thromb Haemost 2007; 5: 604–6.

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C. H. TOH
COAGULA ...AR

Table 2 Scoring system for non-overt Disseminated Intravascular Coagulation (DIC)

1. Risk assessment: does the patient have an underlying disorder known to be associated with DIC?
   yes = 2, no = 0 — 2

2. Major criteria

Platelet Count	>100x10^9 l^{-1} = 0	<100x10^9 l^{-1} = 1	Rising = –1	Stable = 0	Falling = 1
PT Prolongation	<3 s = 0	>3 s = 1	Falling = –1	Stable = 0	Rising = 1
Fibrin related-markers	Normal = 0	Raised = 1	Falling = –1	Stable = 0	Rising = 1

2

3. Specific criteria

Antithrombin	Normal = –1	Low = 1
Protein C	Normal = –1	Low = 1
----------	Normal = –1	Abnormal = 1

2

4. Calculate score: DIC ≥ 7

23/01/2015

- ✓Prima della procedura:
  - 1U CP
  - fibrinogeno 4 gr
  - acido tranexamico 2 gr

Journal of Thrombosis and Haemostasis, 5: 266–273

ORIGINAL ARTICLE

The decrease of fibrinogen is an early predictor of the severity of postpartum hemorrhage

B. CHARBI
O. SIBONY
M. H. DEN

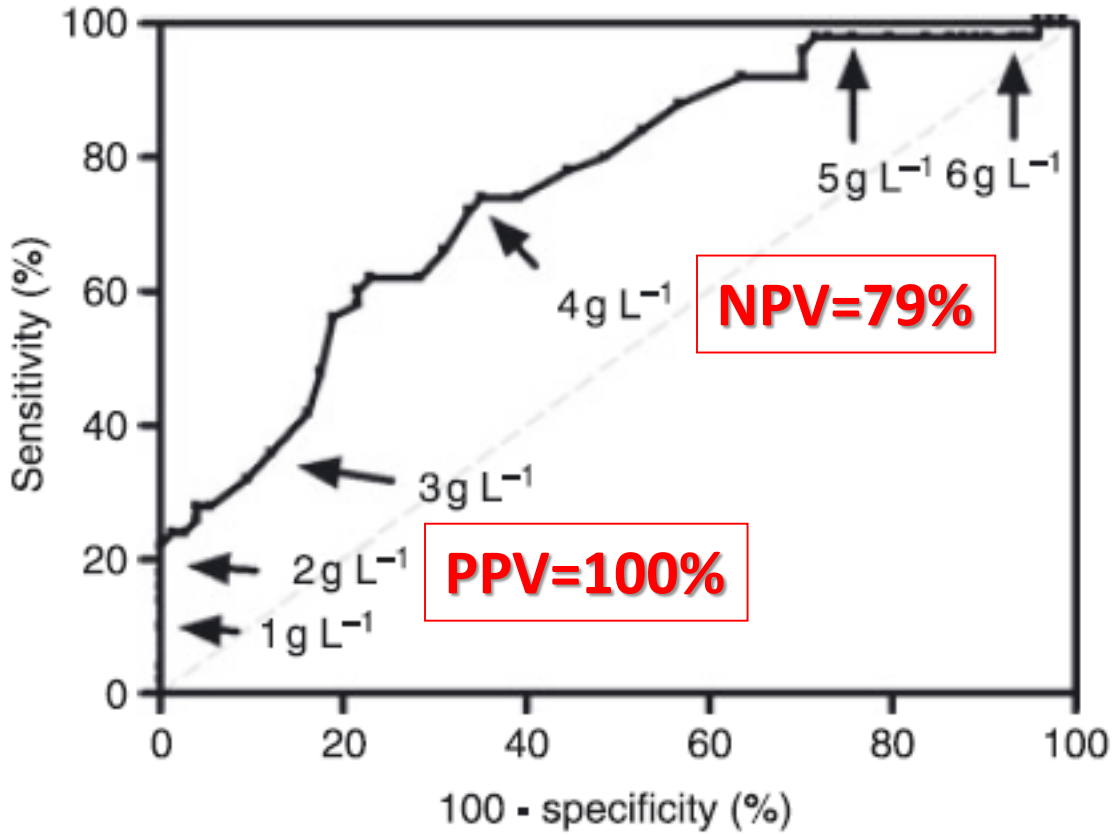

Fig. 3. ROC curve of fibrinogen plasma concentration at H0 for the diagnosis of severe postpartum hemorrhage.

J Thromb Haemost 2015; DOI:10.1111/jth.12838.

Managen vascular coagulati

J. THACHIL,* A

Guidance statement

1 We recommend appropriate treatment of underlying cancer as the first-line strategy for cancer-related DIC.

2 We recommend prophylactic anticoagulation in all patients with cancer-related DIC, except hyperfibrinolytic DIC, in the absence of contraindications. Therapeutic-dose anticoagulation should be used in those who develop arterial or venous thrombosis in this context.

3 We recommend against the routine use of tranexamic acid and recombinant FVIIa in patients with cancer-related DIC. If therapy-resistant bleeding dominates the picture in hyperfibrinolytic DIC, tranexamic acid may be considered.

4 We recommend regular clinical and laboratory surveillance to assess the improvement or worsening of the patient, to detect the development of complications including organ failure, and to ensure the underlying condition is being adequately treated.

23/01/2015

- ✓ Al ritorno in reparto paziente emodinamicamente stabile, minime perdite ematiche vaginali, nega sintomatologia dolorosa.
- ✓ Impostata terapia con sulprostone in 12 ore, consigliata inoltre terapia con misoprostolo in caso di sanguinamento.
- ✓ Nel post-operatorio mantenere
  - Plt >70000/mmc,
  - fibrinogeno >200 mg/dl,
  - AT >90%.
- ✓ Prosegue infusione profilattica di acido tranexamico 15 mg/kg (1000 mg) ogni 8 ore, iniziando invece terapia ad alto dosaggio (4 g in 1 ora, poi 1 g/ora in 6 ore) in caso di comparsa di sanguinamento.

Si faccia una domanda
e si dia una risposta...

Eparina?

OFFICIAL COMMUNICATION OF THE SSC

J Thromb Haemost 2013; **11**: 761–7.

Guidance for diagnosis and treatment of disseminated intravascular coagulation from harmonization of the recommendations from three guidelines

H. WADA,* J. THACHIL,† M. DI NISIO,‡§ P. MATHEW,¶ S. KUROSAWA,** S. GANDO,†† H.K. KIM,‡‡ J.D. NIELSEN,§§ C-E. DEMPFLE,¶¶ M. LEVI,§ C-H. TOH***††† and THE SCIENTIFIC AND STANDARDIZATION COMMITTEE ON DIC OF THE ISTH

	BCSH	JSTH	SISET	ISTH/SSC (evidence level and definitions for R)
Scoring system for DIC	R; grade C	R	R; grade C	R (moderate quality)
Single test analysis for DIC	NR	NR	NR; grade D	NR (moderate quality)
Treatment of underlying disease	R; grade C	R; consensus	R; cornerstone	R (moderate quality)
Platelet concentration	R; grade C	R; consensus	R; grade D	R (low quality)
FFP	R; grade C	R; consensus	R; grade D	R (low quality)
Fibrinogen, cryoprecipitate	R; grade C	NM	R; grade D	R (low quality)
Prothrombin complex concentrate	NM	NM	NM	NM
FVIIa	NR	NM	NR; grade D	NR (low quality)
UFH (treatment for thrombosis)	R; grade C	R; level C	NR; grade D	R (low quality)
UFH (prophylaxis for VTE)	R; grade A	NM	R; grade D?	R (moderate quality)
LMWH (treatment for thrombosis)	R; grade C	R; level B2	R; grade D	R; preferred to UFH (low quality)
LMWH (prophylaxis for VTE)	R: grade A	NM	R; grade D?	R (high quality)
Heparin sulfate	NM	R; level C	NM	NM
Synthetic protease	NM	R; level B2	NR; grade D	NM
rhAPC	R; grade A→D	NM	R; grade D	PR
Protein C concentrate	NM	NM	NR; grade D	NM
AT	NR; grade A	R; B1	NR; grade D	PR
rhTM	NM	NM	NR; grade B	PR
Antifibrinolytic agents	R; grade C	NR; level D	NM	R (low quality)
Plasma exchange	NM	NM	NR; grade D	NM

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Mini Review

Diagnosis and treatment of disseminated intravascular coagulation: Guidelines of the Italian Society for Haemostasis and Thrombosis (SISET)☆

Marcello Di Nisio [a,*], Francesco Baudo [b], Benilde Cosmi [c], Armando D'Angelo [d], Andrea De Gasperi [e], Alessandra Malato [f], Mario Schiavoni [g], Alessandro Squizzato [h]
on behalf of the Italian Society for Thrombosis and Haemostasis

3) In patients with DIC we do not suggest the use of unfractionated heparin (UFH) except for thromboembolic prophylaxis in patients a high risk who do not have active bleeding (grade D)

4) In patients with DIC we do not suggest the use of low-molecular-weight heparin (LMWH) except for thromboembolic prophylaxis in patients at high risk who do not have active bleeding (grade D)

Si faccia una domanda
e si dia una risposta...

Antitrombina?