Supplemental Data

Search strategy, relevant terms

Myeloproliferative neoplasms
Myeloproliferative disorder, myeloproliferative neoplasm, myeloproliferative syndrome, myeloproliferative disease, MPN.

- Erythrocytosis, PV, polycythemia or p vera, Osler Vaquez disease
- Thrombocytosis, ET, essential thrombocythemia
- Primary myelofibrosis, myelofibrosis

Antithrombotic treatment

- Anticoagulant treatment:
    - VKA, Vitamin K antagonist, oral anticoagulant, 4-hydroxicoumarins, warfarin, coumarin, acenocoumarol or nicoumalone or sintrom or sinthrome, phenprocoumon or phepromaron or ethyl-biscoumacetate or phenindione or diphenadione or tioclomarol or marcoumar or marcumar or falithrom, dicoumarol, jantoven, coumafene, zoocoumarin, nitrovarfarian or nitrowarfarin
    - DOAC, direct oral anticoagulant, new or novel oral anticoagulant, NOAC, target specific oral anticoagulant, TSOAC, direct thrombin inhibitor, factor Xa inhibitor, dabigatran or pradaxa, rivaroxaban or xarelto, apixaban or eliquis, edoxaban or lixiana or savaysa, betrixaban or bevyxxa, ximelagatran or exanta, darexaban or otamixaban, razaxaban, bivalirudin, desirudin or lepirudin or melagatran
    - LMWH, low-molecular weight heparin, heparin, dalteparin or fragmin, ardeparin or normiflo, enoxaparin or clexane or lovenox or xaparin, nadroparin or fraxiparin or seleparin, tinzaparin or innohep or logiparin, certoparin or sandoparin or embolex, reviparin, clivarin, danaparoid or orgaran or antixarin bemiparin, hibor, zibor, badyket, semuloparin, parnaparin, tedelgliparin, fluxum, lowhepa, parvoparin, lomoparin, clivarine

- Antiplatelet therapy:
    - Antiplatelet, anti-aggregation, platelet aggregation inhibitor, adenosine diphosphate receptor antagonist
    - Aspirin, acetylsalicylic acid, ticlopidine or desitic, clopidogrel or plavix or iscover, aggrenox, dipyridamole or curantyl or antistenocardin or persantin, prasugrel or effient, ticagrelor or brilinta or brilique or possia, thienopyridine

Thrombosis, venous thromboembolism

- Venous thromboembolism or VTE, deep vein thrombosis or DVT, pulmonary embolism or PE, thrombosis, cerebral venous thrombosis or CVT, cerebral (sino)venous thrombosis or CSVT, splanchnic vein thrombosis, portal vein thrombosis, hepatic vein thrombosis, Budd Chiari Syndrome, mesenteric vein thrombosis

Risk of Bias Assessments – Cochrane ROBINS-I

Risk of bias assessment: Antithrombotics for VTE treatment in MPN patients

Study Year [Reference]	**Overall**	**Confounding**	**Selection**	**Classifications**	**Deviations**	**Missing data**	**Outcomes**	**Reporting**
Colombi 1991 [24]	**S**	**S**	**M**	**M**	**S**	**M**	**L**	**M**
Passamonti 2002 [25]	**M**	**M**	**L**	**L**	**L**	**M**	**L**	**L**
De Stefano 2008 [26]	**M**	**M**	**M**	**L**	**? or N/A**	**? or N/A**	**L**	**M**
Hoekstra 2011 [27]	**M**	**M**	**L**	**L**	**M**	**M**	**L**	**L**
De Stefano 2016a [28]	**M**	**M**	**S**	**L**	**? or N/A**	**M**	**L**	**M**
De Stefano 2016b [29]	**M**	**M**	**M**	**L**	**? or N/A**	**M**	**L**	**M**
Ianotto 2017 [30]	**S**	**S**	**S**	**L**	**L**	**M**	**L**	**M**
Greenfield 2018 [31]	**M**	**M**	**S**	**M**	**M**	**M**	**L**	**M**
Wille 2019 [32]	**M**	**M**	**M**	**L**	**? or N/A**	**M**	**L**	**M**
Curto-Garcia 2020 [33]	**M**	**M**	**S**	**L**	**L**	**M**	**L**	**M**

Risk of bias assessments were made using the Cochrane ROBINS-I (Risk Of Bias In Non-randomized Studies of Interventions) [22]. Overall = overall risk of bias; confounding = bias due to confounding; selection = bias in selection of participants into the study; classification = bias in classification of interventions; deviations = bias due to departures from intended interventions; missing data = bias due to missing data; outcomes = bias in measurement of outcomes; reporting = bias in selection of the reported result; ? or N/A (white boxes) = not enough information or not applicable; L (green boxes) = low risk of bias; M (orange boxes) = moderate risk of bias; S (red boxes) = serious risk of bias.

Supplemental Table 1.

Recurrent thrombotic events in patients splanchnic vein thrombosis vs deep vein thrombosis/pulmonary embolism as baseline event

Recurrent thrombotic events (both arterial or venous)				
Antithrombotic treatment	***Splanchnic vein thrombosis***		***DVT/PE***	
	n/N	*% (CI)*	*n/N*	*% (CI)*
Antiplatelet therapy only	2/2	100.0 (15.8-100.0)	0/2	-
Antiplatelet + cytoreduction	0/12	-	1/9	11.1 (0.3-48.3)
Oral anticoagulation (any)	7/47	14.9 (6.2-28.3)	2/11	18.2 (22.8-51.8)
Oral anticoagulation (any) + cytoreduction	23/117	19.7 (12.9-28.0)	26/132	19.7 (12.3-27.5)
Oral anticoagulation + antiplatelet therapy	1/5	20.0 (0.5-71.6)	1/2	50.0 (1.3-98.7)
Oral anticoagulation + antiplatelet + cytoreduction	1/14	7.1 (0.2-33.9)	8/17	47.1 (23.0-72.2)
No antithrombotic treatment or cytoreduction	0/1	-	2/5	40.0 (5.3-85.3)
Cytoreduction only	11/31	35.5 (19.2-54.6)	0/9	-
Recurrent venous thrombotic events				
Antithrombotic treatment	***Splanchnic vein thrombosis***		***DVT/PE***	
	n/N	*% (CI)*	*n/N*	*% (CI)*
Antiplatelet therapy only	1/2	50.0 (1.3-98.7)	0/2	-
Antiplatelet + cytoreduction	0/12	-	1/9	11.1 (0.3-48.3)
Oral anticoagulation (any)	4/47	8.5 (2.4-20.4)	2/11	18.2 (22.8-51.8)
Oral anticoagulation (any) + cytoreduction	14/117	12.0 (6.7-19.3)	23/132	17.4 (11.4-25.0)
Oral anticoagulation + antiplatelet therapy	1/5	20.0 (0.5-71.6)	1/2	50.0 (1.3-98.7)
Oral anticoagulation + antiplatelet + cytoreduction	1/14	7.1 (0.2-33.9)	3/17	17.6 (3.8-43.3)
No antithrombotic treatment or cytoreduction	0/1	-	2/5	40.0 (5.3-85.3)
Cytoreduction only	8/31	25.8 (11.9-44.6)	0/9	-

Exploratory comparative analysis of studies in which all patients had splanchnic vein thrombosis as baseline event (Hoekstra 2011, De Stefano 2016a, Greenfield 2018) and studies in which all patients had deep vein thrombosis or pulmonary embolism as baseline event (De Stefano 2016b). Recurrent thrombotic events are presented as proportion n/N (% [95% confidence interval of proportion]).
Abbreviations: DVT = deep vein thrombosis; PE = pulmonary embolism; CI = confidence interval