NHS
Greater Glasgow and Clyde

CLINICAL GUIDELINE

Thrombophilia Criteria for Testing and Request Form

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

Version Number:	5
Does this version include changes to clinical advice:	No
Date Approved:	17th May 2018
Date of Next Review:	1st July 2020
Lead Author:	Catherine Bagot
Approval Group:	Haematology Management Team

Important Note:

The Intranet version of this document is the only version that is maintained.
Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

GGC - Criteria for Thrombophilia Testing

Introduction

BCSH Guidelines on testing for heritable thrombophilia (2010), as well as the RCOG Green Top Guideline 37a (April 2015) have highlighted likely excessive, and at times inappropriate, thrombophilia test requesting.

The following advice represents the local pragmatic adaptation of advice from the above national guidelines, and form a standard against which future audit can be undertaken. Essentially thrombophilia screening should only be undertaken if it can be envisaged that the results could influence the management either of the patient or their relatives.

Thrombophilia Test Repertoires

Full Screen - coagulation screen (PT, APTT, TCT)
Protein C and Antithrombin activity
Free protein S antigen
Activated Protein C resistance (nAPCsr) [using dilution in FV deficient plasma]
Molecular tests: Prothrombin G20210A polymorphism
Factor V^{Leiden} (only if reduced nAPCsr)
Antiphospholipid antibody (APS) screen:
LA sensitive APTT
LA sensitive APTT 50:50 (only if APTT prolonged)
DRVVT
DRVVT + excess phospholipids (only if DRVVT prolonged)
IgG and IgM ACA

Acquired screen
APS screen only (as above)
NOTE: for APS to be clinically significant, testing must be performed twice at least 12 weeks apart with the same tests being positive on both occasions

Inherited screen
As for *Full screen* but excluding APS testing

NOTE: Components of the test repertoires can be requested individually on Trakcare.

Deficiencies of AT, PC and PS may be regarded as major heritable thrombophilias

Requirements for testing

Samples – *Full screen,* 4 citrate tubes (~ 20ml)
Acquired screen, 2 citrate tubes (~ 10ml)
Inherited screen, 2 citrate tubes (~ 10ml)

Outwith NHSGGC [in NHSGGC forms are completed on Trakcare] a specific thrombophilia request form **must** be used and all forms accompanying samples **must** be completed in full. Without complete clinical details, results are extremely difficult to interpret and therefore samples will not be tested if the accompanying forms are inadequately completed. If the indication for testing falls outwith these guidelines, then testing **must** be discussed with a consultant haematologist.

When should testing be undertaken?

Ideally when:
Not on any oral (Vitamin K antagonist or direct oral anticoagulant), iv or sc anticoagulant
At least 3-4 weeks after stopping warfarin or other Vitamin K antagonist
At least 4-6 weeks after an acute thrombotic event
Non pregnant and at least 6 weeks post partum
Not on an oestrogen-containing oral preparation

Who should be offered Thrombophilia testing?

Full thrombophilia screening

i. **Symptomatic patients**
   - Patients with venous thromboembolism (VTE) who also fulfil any 2 of the following 3 criteria:
     a) < 45y
     b) Family History (FH) of VTE (at least 2 relatives)
     c) Idiopathic VTE or with only minor provoking risk factor (e.g. hormone related [including pregnancy], minor trauma, long distance travel)

Acquired thrombophilia screening

i. **Patients <55y with arterial disease (ACS or CVA) *without* an obvious cause or risk factor**
ii. **Patients with a history of significant pregnancy morbidity**

e.g. 3 first trimester miscarriages (< 10 weeks)
1 late fetal loss (≥10 weeks)
Testing following 2 first trimester miscarriages at <10 weeks can be considered on an individual basis e.g. if patient age >35 yrs
All testing must be performed > 6 weeks following any pregnancy loss

Inherited thrombophilia screening

i. **Pregnant patients at booking**
Asymptomatic, but FH in 1st degree relative of VTE which was unprovoked or provoked by a minor risk factor (e.g. hormone-related [including pregnancy], minor trauma, long distance travel).

Other

i. **Symptomatic or asymptomatic individuals**
From symptomatic families with an inherited major thrombophilia, test for the known thrombophilia
ii. **Pregnant patients at booking if either of the following:**
   a. Asymptomatic, but history of VTE and an inherited thrombophilic abnormality in any family member, test for the known thrombophilia
   b. Pregnant patients with a personal history of VTE which was unprovoked or provoked by a minor risk factor (e.g. hormone-related, minor trauma, long distance travel) should be tested for antithrombin deficiency **only** as this might alter management during their pregnancy.

Any additional thrombophilia testing in these patient groups should first be discussed with a consultant haematologist as, due to a current lack of evidence, such testing should only be performed in the context of a clinical trial.

Who should not be offered Thrombophilia testing?

- Unselected individuals with no personal or family history of VTE
- Patients with a central vein catheter (CVC) related venous thrombosis
- Patients with a retinal vein thrombosis
- Pregnant women with no personal history of VTE and no FH of either VTE or major heritable thrombophilia
- Asymptomatic women due to start combined oral contraceptive pill (COCP) or Hormone Replacement Therapy (HRT) with FH VTE as the circumstances of the familial thrombosis is of greater importance when deciding on choice of contraceptive, than the presence or absence of a heritable thrombophilia.
- Pregnant patients who will receive LMWH irrespective of thrombophilia status (also refer to above regarding isolated antithrombin testing)

THROMBOPHILIA SCREEN REQUEST FORM : GG&C HAEMATOLOGY SERVICES Rev 4 CB April 2017

If not requesting thrombophilia tests via TrakCare, this form must be used.
IF DETAILS ARE MISSING THE REQUEST WILL BE REFUSED AND SAMPLES WILL BE DISCARDED

NOTE: This form is only for use for the investigation of thrombophilia, it is not required for anti-phospholipid screening in patients with an unexplained prolonged APTT or connective tissue disorder

INDICATIONS FOR SCREENING MUST BE IN ACCORDANCE WITH GG&C POLICY
(CLICK HERE FOR GGC THROMBOPHILIA GUIDELINES)

(Affix addressography label if available) Forename: Surname: D.O.B: CHI:	Referring Consultant : Location Hospital: Ward: Date & Time of Request: Routine/Urgent (Please circle)

PLEASE TICK

1. Full Thrombophilia Screen ☐ (4 citrate bottles)
2. Acquired Thrombophilia Screen [lupus anticoagulant + Anticardiolipin Ab] ☐ (2 citrate bottles)
3. Inherited Thrombophilia Screen [full screen excluding LA and ACA] ☐ (2 citrate bottles)
4. Confirm a previously detected abnormality ☐ (2 citrate bottles)
   Please specify previous abnormal result: ……

PLEASE CONFIRM THE FOLLOWING BY PLACING A TICK IN EACH BOX
If any box cannot be ticked, and testing is still required, please discuss with consultant haematologist.

1. Request has been authorised by Consultant in charge of patient:- ☐
   (GP's please discuss any request with Consultant Haematologist)
2. Patient is > 6 weeks from venous thrombosis:- ☐
3. Patient is > 4 weeks from any oral anticoagulant therapy:- ☐
4. Patient is not on any oral, SC or IV anticoagulation:- ☐
5. Patient is not pregnant or taking an estrogen containing oral preparation:- ☐
   [unless falling within Thrombophilia Testing Guideline]
6. Patient fulfils GG&C criteria for thrombophilia screen:- ☐

Any thrombophilia testing required urgently must be discussed with a consultant haematologist

Clinical Details:-	Local Lab No.
Requested by: (Please Print) Contact details: (Please Supply)	GRI Lab No.

Further copies of this form can be downloaded from Staffnet/Acute/Diagnostics/All Lab Medicine/Thrombophilia Guidelines.
Thrombophilia Laboratory Telephone Number 0141 211 4461