

Antiphospholipid syndrome (APS) and pregnancy

APS is an autoimmune disease, which means that the immune system creates abnormal antibodies that attack components of the body itself causing the disease. In APS these antibodies target proteins that are linked to phospholipids in cell membranes. The most important of these proteins is called beta-2-glycoprotein I.

Although patients with APS may experience a range of different symptoms, the most characteristic features that are used to define the disease are vascular thrombosis and pregnancy morbidity. Therefore, midwives may encounter patients with APS in their everyday practice.

By definition, APS is diagnosed in patients who test positive for antiphospholipid antibodies and who have suffered either vascular thrombosis or pregnancy morbidity or both. The definition of pregnancy problems that qualify for diagnosis of APS is complex but can be summarised as either one late fetal loss (after 10th week of gestation) or three early fetal losses (before week 10) or one or more premature births before week 34 due to eclampsia, severe pre-eclampsia or placental insufficiency.

There are four major scenarios relating to APS and pregnancy

- 1) Patients who are known to have APS due to having had thrombosis but with no history of pregnancy problems (first pregnancy or previous uncomplicated pregnancy). These patients will probably be taking an anti-coagulant such as warfarin. Since warfarin is contra-indicated

in pregnancy, this should have been changed to subcutaneous heparin, which will be continued throughout pregnancy.

- 2) Patients with APS who have had APS-related pregnancy problems (with or without a history of thrombosis). Currently, the standard management of these cases is with subcutaneous heparin plus oral low-dose aspirin throughout pregnancy. If the patient has had no previous history of thrombosis and does not normally take anticoagulants outside pregnancy, it is still common practice to continue heparin for six weeks post-partum because this is a high-risk period for thrombosis.
- 3) Patients who have incidentally tested positive for antiphospholipid antibodies but have never had either thrombosis or pregnancy problems. For example, many people with other autoimmune diseases such as lupus may have had antiphospholipid tests as part of their routine screening. There is no evidence supporting use of heparin in these patients but they are often given low-dose aspirin throughout pregnancy.
- 4) Patients who are concerned about having APS but who have never been tested. Patients may be concerned, for example, because of a history of previous miscarriage and symptoms such as migraine, which can occur in APS but which are also common in the general population. The tests for APS are simple to carry out but complex to interpret. There are three blood tests; the anti-cardiolipin test, the lupus anticoagulant test and the anti-beta₂glycoprotein I test. An individual patient can be positive in one, two or all three tests. Those who are triple-positive are at the highest risk of developing APS. Ideally, these tests should be repeated at least 12 weeks later to make sure that they remain positive – though

this would not necessarily be feasible in the scenario of a pregnant woman where a decision about treatment needs to be made.

It is important to remember that about 5% of the healthy population test positive for antiphospholipid antibodies in at least one of these tests even though they do not have APS (false –positive tests). This means that it would not be helpful to test every pregnant woman for these antibodies because it would create a large number of worried well people.

So who should be tested? Any woman with an unexplained late pregnancy loss should be tested for APS. The issue of early miscarriages is more difficult because the majority of women with a single early miscarriage do not have APS. On the other hand, a patient who is only tested and found to be positive after suffering a third miscarriage may understandably feel that they should have been diagnosed earlier. It is important to discuss with a patient who wants to be tested the pros and cons of having the test, and whether a positive test would lead to treatment with aspirin or aspirin plus heparin. These treatments, particularly heparin, can themselves have adverse effects such as an increased risk of bleeding.

It is very important that pregnant women with APS should be managed by a multi-disciplinary team including obstetricians, haematologists and sometimes rheumatologists. Monitoring of these pregnancies is important as there is an increased risk of intra-uterine growth retardation and pre-eclampsia.