

46. Air Travel and thrombophilia

Last Updated: 2/15/2004

Q: "I had a clot in the lung 4 years ago while on the pill and was found to have factor V Leiden. I am pregnant now and am due to go on a long-distance flight in 3 months. I will be 25 weeks pregnant at that time. When I have previously traveled by plane (after discovering I have Factor V Leiden) I took precautions such as wearing Support Stockings, drank 3 - 4 litres of water so I didn't dehydrate, moved my legs for the whole flight and walked around every 15 - 20 minutes. I plan to do this again and be on heparin injections. Can I still travel if I carried out all precautions?"

A: Not knowing all the patient's medical details I am not able to give a solid opinion. However, it appears that it is o.k. for her to fly.

General precautions during airline travel:

- Avoid constrictive clothing on the legs,
- Avoid sitting with legs crossed,
- Move the legs frequently, at 30 minutes intervals (either while seated or by getting up):
 - Extend your legs straight out in front and flex your ankles, pulling up and spreading your toes, then pushing down and curling your toes. If shoes limit toe movement, exercise anyway or take shoes off;
 - If there isn't room to extend your legs, start with your feet flat on the floor and push down and curl your toes while lifting your heels from the floor. Then, with your heels back on the floor, lift and spread your toes. Repeat this heel - toe cycle ten times;
 - Exercise your thigh muscles by sitting with your feet flat on the floor and sliding feet forward a few inches, then sliding them back. Repeat ten times.
- Drink plenty of fluid (non alcoholic and caffeine-free) to avoid dehydration,
- Consider wearing compression stockings (they should not cut into the leg).

Thrombophilic patients It has not been examined which patients should receive an injection of heparin before a long-distance flight. Therefore, no solid recommendations can be given. My personal approach is:

- A. Patient (pregnant or not) who is on oral blood thinners (warfarin, coumadin®, etc.) because of a previous DVT/PE: As long as the INR is therapeutic, the risk of an acute DVT/PE during the flight is likely quite low. I would not put such a patient on additional heparin or aspirin during the flight.
- B. Patient who is not on oral blood thinners:
 - a. Patient (pregnant or not) who is at higher risk for a DVT/PE, i.e. patient with previous DVT or PE and
 - homozygous factor V Leiden,
 - homozygous II20210 mutation,
 - double heterozygous for FVL and II20210,
 - antiphospholipid antibody syndrome,
 - antithrombin III deficiency;

I would discuss (and probably recommend) a pre-flight heparin shot (such as Fragmin® 2,500 U or Lovenox®40 mg 1-4 hours before the flight) with these patients. However, often these patients are on long-term anticoagulants anyway. I would then not add additional heparin (see "A").

- b. Person (pregnant or not) who has never had a DVT or PE, but who has a family history of DVT or PE and who has
 - homozygous factor V Leiden,
 - homozygous II20210 mutation,
 - double heterozygous for FVL and II20210,
 - antiphospholipid antibodies,
 - antithrombin III deficiency;

I would discuss (but not necessarily recommend) a pre-flight heparin injection with these individuals. If the individual is pregnant she may already be on heparin injections anyway because of her pregnancy.

- c. Person who has never had a blood clot and who is heterozygous for FVLeiden or the II20210 mutation: I would usually not recommend a pre-flight heparin shot, even if the patient is pregnant.

Pre-flight aspirin probably does little and may do nothing to prevent DVT or PE. However, it has not been studied in this situation. The use of Nattokinase is discussed elsewhere (see Q/A Nattokinase - This Q/A appears to be missing - TF).

Pregnancy and air travel

The American College of Obstetricians and Gynecologists (ACOG) has made a statement about "Air Travel and Pregnancy" [ACOG Committee Opinion number 264, Dec 2001, page 1187-1188]: "Air travel during pregnancy is safe for most women. Pregnant women at significant risk for preterm labor or with placental abnormalities should avoid air travel. Pregnant air travelers with a compromised cardiovascular system (pulmonary hypertension, congestive heart failure, severe chronic obstructive airways disease, etc) should be prescribed supplemental oxygen. In the absence of complications, pregnant women can observe the same general precautions while traveling as the general population". ACOG does not make a statement on air travel in women with thrombophilia and with previous blood clots.

Additional information can be found at www.airhealth.com.