

Prevention of deep vein thrombosis associated with flying

Low-dose aspirin is not licensed for the prevention of deep vein thrombosis associated with flying.

The association between air travel and venous thrombosis is disputed and some evidence suggests that the risk is no greater than the general risk of developing a deep vein thrombosis (1). Conversely, other studies suggest the level of risk associated with long-haul travel may be as high as 1% (2). Despite this, there is a perception by the general public that air travel, especially long haul travel, is associated with a significant risk of deep vein thrombosis.

In the venous system, the coagulation cascade has pre-eminence in the clotting process. In the arterial system, it is platelet aggregation that is pre-eminent. Hence anticoagulants, e.g. warfarin, are prescribed for the treatment and prophylaxis of deep vein thromboses and antiplatelets, e.g. low-dose aspirin, for atherothrombotic disorders.

This also explains why aspirin is not routinely recommended for the prevention of DVTs associated with long haul travel.

However, three independent recommendations suggest:

For a passenger at moderate risk of thrombosis, a single dose of 150mg on the day prior to travel may be reasonable; alternatively, 75mg may be taken a few hours before the flight and for a couple of days afterwards (3). Aspirin is not recommended for those at low risk. High risk travellers should be referred for low-molecular-weight heparin or assessment that they are fit to travel.

The Aviation Health Institute recommends taking low-dose aspirin (100 - 150mg) on the day before, during a long haul flight, and for three days after (4).

SIGN Guidelines issued in October 2002 recommend a single dose of aspirin (150mg) before travel in patients at high risk of thrombosis (e.g. previous venous thromboembolism, known thrombophilia, recent major trauma, surgery or immobilising medical illness, pregnancy) (5). Elastic compression stockings may also be used. The guidelines note that the risk is highest in flights of over 3000 miles.

In May 2005, the British Committee for Standards in Haematology stated that there is no evidence to support the use of aspirin in air travellers at low, moderate or high risk of developing deep vein thrombosis (6). A review concluded that 17,000 travellers at average risk would need to take aspirin to avoid one case of venous thrombosis; the corresponding figure for someone at high risk was 8,600 (7). This review assumed that the absolute level of risk was 1 - 4 per 100,000 travellers.

References:

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