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DUTCH TRUMBOSE FOUNDATION WANT ATTENTION FOR DANGER OF LONG-TERM SITES IN THE AIRPLANE (translated)

Seated on the plane for more than four hours increases the risk of thrombosis. Airlines should therefore actively pay attention to the dangers, according to the Thrombosis Foundation. Our organization is launching a petition to encourage airlines to pay high attention on it.
Anyone who has been sitting still in an airplane for more than four hours is at an increased risk of a thrombosis leg or pulmonary embolism, the foundation says. Little legroom or not with the feet near the ground can cause blood vessels to pinch in the leg. Combined with drinking too little water and the lower air pressure on board, that risk increases. Even more danger threatens people who belong to a risk group, for example due to an older age, pregnancy, obesity, pill use, a recent operation or previous experience with thrombosis.
The Thrombosis Foundation indicates that the risk is not only valid during or shortly after the trip, but is still current even eight weeks later.
Of the people who make a flight longer than four hours, about 1 in 4,500 get thrombosis, according to data from the foundation. “If you realize that in May alone there were more than 7,500 intercontinental flights to and from Schiphol, with a total of more than 1,650,000 passengers on board, the number of people who experience a thrombosis as a result is significant.

Although thrombosis cannot always be prevented, there are ways to reduce the chance of it. That is why the foundation emphasizes information about the risks, and what travelers can do about it themselves. “Wear simple exercises, plenty of clothes and drink enough water. ”
Nevertheless, that information in aviation is virtually not forthcoming. With the petition, the Thrombosis Foundation calls on airlines to take their responsibility and actively inform passengers, both when booking and during the flight.

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Translated from www://luchtvaartnieuws.nl

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The numbers mentioned based on a medical scientific covering more than 8.000 people publication, show that for this month of may, only among passengers flying more than four hours in and out of Schipol Amsterdam airport should stand for 366 Thrombose cases within eight weeks.

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Absract of medical research publication :

The Absolute Risk of Venous Thrombosis after Air Travel: A Cohort Study of 8,755 Employees of International Organisations

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Abbreviations: BMI, body mass index; CI, confidence interval; IR, incidence rate; IRR incidence rate ratio; PY, person-year(s)

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Background

The risk of venous thrombosis is approximately 2- to 4-fold increased after air travel, but the absolute risk is unknown. The objective of this study was to assess the absolute risk of venous thrombosis after air travel.

Methods and Findings

We conducted a cohort study among employees of large international companies and organisations, who were followed between 1 January 2000 and 31 December 2005. The occurrence of symptomatic venous thrombosis was linked to exposure to air travel, as assessed by travel records provided by the companies and organisations. A long-haul flight was defined as a flight of at least 4 h and participants were considered exposed for a postflight period of 8 wk. A total of 8,755 employees were followed during a total follow-up time of 38,910 person- years (PY). The total time employees were exposed to a long-haul flight was 6,872 PY. In the follow-up period, 53 thromboses occurred, 22 of which within 8 wk of a long-haul flight, yielding an incidence rate of 3.2/1,000 PY, as compared to 1.0/1,000 PY in individuals not exposed to air travel (incidence rate ratio 3.2, 95% confidence interval 1.8–5.6). This rate was equivalent to a risk of one event per 4,656 long-haul flights. The risk increased with exposure to more flights within a short time frame and with increasing duration of flights. The incidence was highest in the first 2 wk after travel and gradually decreased to baseline after 8 wk. The risk was particularly high in employees under age 30 y, women who used oral contraceptives, and individuals who were particularly short, tall, or overweight.

Conclusions

The risk of symptomatic venous thrombosis after air travel is moderately increased on average, and rises with increasing exposure and in high-risk groups.

The Editors' Summary of this article follows the references.

Introduction

In 1951, Jacques Louvel reported four cases of venous thrombosis following air travel [1]. More recently, several investigators have shown an association between air travel and venous thrombosis, with a 2- to 4-fold increased risk in most studies [2–8]. Two follow-up studies demonstrated a dose–response relationship between the occurrence of pulmonary embolism shortly after arrival at the airport and the distance travelled [9,10]. Still, the most relevant element, i.e., the absolute risk of symptomatic venous thrombosis after long-distance air travel, remains unknown. One follow-up study demonstrated an absolute risk of severe pulmonary embolism occurring shortly after arrival of 1/200,000 pas- sengers [9], whereas another study showed a risk of fatal pulmonary embolism of 1.3 per million passengers [11]. Asymptomatic clots have been found in 1% to 10% of air travellers [12–14]. Hence, the absolute risk of symptomatic venous thrombosis after long-haul travel must lie between these extremes.

Knowledge of the absolute risk of symptomatic thrombosis after air travel is needed to provide travellers with solid advice regarding their actual risk and to evaluate the utility of prophylactic measures. Since two billion passengers fly annually (2005 data [15]), even a small increase in risk will have a major impact on the number of events. Over-estimation of the risk may lead to inappropriate use of potentially dangerous antithrombotic drugs [16,17].

In addition to estimating the absolute risk of symptomatic deep vein thrombosis or pulmonary embolism after long haul air travel, we assessed the effects of exposure to several flights within a short time frame, duration of travel, and the occurrence of venous thrombosis in relation to the time passed after air travel. Finally, we determined the effect of air travel within high-risk groups.

Methods

Study Design

We performed a cohort study among employees of large international companies and organisations. During the follow-up period, thrombotic events were linked to exposure to air travel.

Participating Companies and Organisations

Participating companies and organisations were Nestle´ (Vevey, Switzerland), General Mills (Minneapolis, Minnesota, US), the US Centers for Disease Control and Prevention (Atlanta, Georgia, US), the World Bank and the International Monetary Fund (Washington, D. C., US), Shell Companies based in The Hague (The Netherlands) and London (UK), Shell Exploration and Production (SIEP) based in Rijswijk (The Netherlands), Sakhalin Energy Investment Company Ltd (SEIC) based in Sakhalin (Russia), and TNT NV (Thomas Nationwide Transport, Hoofddorp, The Netherlands). All organisations and companies had a central database with records of employees' business travel. Start of follow-up varied per company, between 1 January 1998 and 1 January 2001 or at start of the employment if later. Follow-up ended between 1 December 2002 and 1 January 2006, when venous thrombosis was diagnosed or at the end of employment, whichever occurred first, with approximately 5 y of follow-up per company.

Questionnaires and Flight Data

We developed Web-based questionnaires, using Apian Survey Pro 3.0. These contained questions about venous thrombosis occurrence (at any time point in the follow-up period) and risk factors for venous thrombosis. Employees

were invited to take part by a personal e-mail containing a link to the questionnaire and a unique password, which ensured that each individual could enter only once. With intervals of a few weeks, nonresponding employees received two or three reminders. The questionnaire can be viewed at http://www.clinicalresearch.nl/epidemiology/wrightquestionnaire/wrightquestionnaire.asp (note: a password is not necessary to view the questionnaire).

Date of travel and duration of travel (not including stopover time) were taken from the organisations' travel database.

Outcomes

Participants who reported venous thrombosis were asked to fill in a consent form for medical chart review. Only symptomatic first venous thrombotic events that were diagnosed with objective methods were considered. Deep vein thrombosis had to be diagnosed by compression ultra- sonography or venography. Pulmonary embolism had to be diagnosed by spiral CT scanning, high-probability ventila- tion-perfusion scanning, or angiography. Superficial thrombophlebitis was not included.

Statistical Analysis

For the analysis of the overall effect of flying, exposure time was defined as a time window of 8 wk after a long-haul flight (flight of at least 4 h). For each individual, the total time exposed and not exposed was calculated. The incidence rate (IR) of venous thrombosis within 8 wk of a long-haul flight was calculated by dividing the number of cases that occurred in this exposure window by the number of exposed person- years (PY). The IR of venous thrombosis without exposure was calculated in the same way (events over person-time outside exposure windows). The incidence rate ratio (IRR) adjusted for age and sex was calculated using Poisson regression analysis. The overall effect of flying was assessed for the whole group of employees and separately for subgroups based on sex, age, oral contraceptive use, body mass index (BMI), and height. The number of person-years exposed and unexposed to oral contraceptive use was calculated for women younger than 50 y.

In addition, we calculated the absolute risk of venous thrombosis per flight by dividing the number of cases that occurred within 8 wk of a long-haul flight by the total number of flights longer than 4 h made by all responding employees.

Employees were often exposed to more than one flight in the 8 wk exposure windows, so time windows were frequently overlapping. To assess the effect of number of flights, the total time employees were exposed to one to five flights or more was calculated. Thus, IRs and IRRs for exposure to one or two, three or four, and five or more flights could be calculated (Figure 1A). Furthermore, we calculated the increase in risk for each extra flight using Poisson regression.

To assess the effect of duration of travel, we calculated IRs and IRRs within 8 wk of flights of varying duration, i.e., 0–4 h, 4–8 h, 8–12 h, 12–16 h, and longer than 16 h. If time windows were overlapping, only the duration of the longest flight was considered for this analysis

Travel and VT: Absolute Risk