Air travel during early postoperative period after TJR deemed safe in study

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CHICAGO — As air travel and total joint reconstruction are independent risk factors for the development of venous thromboembolism, some surgeons have advised patients against flying during the early postoperative period. Now, new research suggests that air travel after arthroplasty is safe.

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"This is the first study that examines the risk of symptomatic [venous thromboembolism] VTE for flying in the early postoperative period and it allows us as surgeons to provide some guidance to patients who ask about flying in the early postoperative period," **H. John Cooper, MD,** said during his presentation at the American Academy of Orthopaedic Surgeons Annual Meeting. "Using this sort of multimodal approach to prophylaxis with an emphasis on early mobilization, the rate of symptomatic VTE was low and it was not increased over a control group that did not fly. Although there probably is some degree of self selection bias of patients who choose to fly during the early postoperative period, allowing these patients who want to fly to do so, does appear to be safe."

Case-control study

Cooper and colleagues conducted a retrospective case-control study of 1,465 consecutive, primary unilateral total hip and knee arthroplasties performed by a single surgeon at a single center during an 18-month period. Of these cases, 228 patients self-elected to take air travel at a mean of 3 days after surgery, with a mean flight duration of 2.7 hours.

Patients who flew during the early postoperative period and those who did not had similar baseline demographics, Cooper said. However, patients who flew were an average of 6 years older and had a lower body mass index. Both groups had the same multimodal VTE prophylaxis regimen with mobilization

on postoperative day 0, mechanical prophylaxis in hospital and chemoprophylaxis using a risk stratification model. Cooper noted that 96% of patients overall had aspirin only as their chemoprophylaxis.

Patients who flew were also advised to wear compression stockings on the plane, perform ankle-pump exercises and walk once an hour during their flights.

Rates of VTE

"DVT occurred in 0.4% in the control group vs 0.9% in the study group," Cooper said. "Symptomatic [pulmonary embolism] PE occurred in 0.8% in the control group vs 0.5% in the flight group, getting a total rate of VTE disease of 1% in the control group vs 1.4% in the flight group. These did not come close to statistical significance."

Patients who developed a symptomatic VTE event had a mean flight time of 2.3 hours. The investigators found no significant difference between these patients and those who did not develop a VTE in any of the study parameters, Cooper said.

"Current guidelines, both [American Academy of Orthopaedic Surgeons] AAOS and American College of Chest Physicians [ACCP] have clinical practice guidelines on VTE prophylaxis following total joint replacement, but neither of these comment on flying in the early postoperative period," he said. "The CDC says there are combined effects between established risk factors such as recent, major orthopedic surgery and different forms of travel like air, but they do not provide any basis for the recommendation that patients should not fly." – *by Gina Brockenbrough, MA*

References

Cooper HJ. Paper #694. Presented at: American Academy of Orthopaedic Surgeons Annual Meeting; March 19-23, 2013; Chicago.

Disclosure: Cooper has no relevant financial disclosures.