Hypertension in Indonesian air force pilots

Siagian, Minarma, author

Abstrak

Latar Belakang: Penelitian ini bertujuan untuk mengkaji hubungan antara bising yang disebabkan oleh pesawat terbang dengan tekanan darah. Metode: Penelitian nested case-control dilakukan pada penerbang Angkatan Udara Republik Indonesia yang melakukan pemeriksaan fisik tahunan di Lembaga Kesehatan Penerbangan dan Ruang Angkasa (LAKESPRA) Saryanto tahun 2003 ? 2008. Data yang diperoleh dari rekam medis berupa umur, jumlah jam terbang, jenis pesawat, kadar glukosa puasa dan kadar kholesterol darah, lingkaran pinggang, tinggi dan berat badan (Indeks Massa Tubuh), serta tekanan darah. Hasil: Dari 549 penerbang, ada 49 yang hipertensif, dengan tekanan sistolik ≥ 140 mmHg dan/atau tekanan diastolik ≥ 90 mmHg. Penerbang pesawat helikopter mempunyai risiko menderita hipertensi hampir 2 kali dibandingkan penerbang pesawat terbang biasa. Penerbang dengan jumlah jam terbang lebih dari 1400 jam mempunyai risiko menderita hipertensi lebih 2 kali dibandingkan penerbang dengan jumlah jam terbang ≤ 1400 jam. Kesimpulan: Jenis pesawat terbang, yang berkaitan dengan jenis bising yang terbangkit, mungkin merupakan faktor risiko hipertensi pada penerbang. Peningkatan jumlah jam terbang meningkatkan risiko hipertensi

<hr>Background: To investigate the association between aircraft noise and blood pressure. Methods: A nested case-control study was conducted on Indonesian Air Force pilots doing annual medical check-ups at the Saryanto Institute for Aviation and Aerospace Health (LAKESPRA) from 2003 ? 2008. The data extracted from medical records were age, total flight hours, type of aircraft, fasting blood glucose and cholesterol levels, waist circumference, height and weight (Body Mass Index), and blood pressure. Results: There were 549 pilots, 49 were found to be hypertensive, with SBP ≥ 140 mmHg and/or DBP ≥ 90 mmHg. Helicopters pilots were at an almost 2 fold risk of hypertension compared to pilots of the fixed wing aircrafts. Pilots with more than 1400 hours of flight had more than 2 fold risk of being hypertensive compared to those with 1400 flight hours or less. Conclusion: The type of aircraft, which is related to the noise generated, may be a risk factor for developing hypertension in pilots. Increased total flight hours also increased the risk of hypertension.