Endocarditis and risk of cancer: a Danish nationwide cohort study.

https://arctichealth.org/en/permalink/ahliterature117854

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Date: Jan-2013

Language: English

Publication Type: Article

Keywords: Adolescent, Adult, Aged, Aged, 80 and over, Anti-Bacterial Agents - therapeutic use, Cohort Studies, Denmark - epidemiology, Endocarditis - drug therapy - epidemiology, Female, Humans, Immunosuppression, Incidence, Male, Middle Aged, Neoplasms - epidemiology, Risk assessment, Risk factors, Young Adult
Abstract: Endocarditis may be a marker for bacteremia-associated occult cancer. Intensive antibiotic treatment in endocarditis is suggested to reduce long-term cancer risk. We examined these hypotheses in a nationwide cohort study.

Endocarditis patients and cancer cases were identified from the Danish National Registry of Patients and the Danish Cancer Registry during 1978-2008. We compared the incidences of various cancers among study subjects to expected incidences based on national age-, sex-, and site-specific rates.

We observed 997 cancers among 8445 endocarditis patients (median follow-up of 3.5 years), reflecting an increased standardized incidence rate (SIR) of 1.61 (95% confidence interval [CI], 1.51-1.71). Cancer risk was highly elevated during the first 3 months of follow-up (SIR=8.03; 95% CI, 6.92-9.26), partly due to a 15- to 30-fold increased risk of hematological or liver cancers. Between 3-month and 5-year follow-ups, cancer incidence remained 1.5-fold higher than expected, including 2- and 4-fold increased SIRs for colorectal and liver cancers, respectively. Beyond 5 years of observation, the overall cancer SIR was 1.21 (95% CI, 1.10-1.34). Long-term associations were weak for several cancers hypothesized to be associated with antibiotic use, including prostate, gastric, and breast cancer.

Endocarditis is a substantial clinical marker for presence of occult cancer. We found no evidence of decreased long-term cancer risk after antibiotic treatment for endocarditis.

PubMed ID: 23260503 View in PubMed