

**P0473**

**Paper Poster Session**

**Bloodstream infection risk factors and pathogenesis**

**Aspirin and statin use and mortality in patients with community-acquired bacteraemia: population-based propensity score matched cohort studies**

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**Background:** Infections may trigger acute cardiovascular events. Aspirin and statin are pivotal for the prevention of acute cardiovascular events, and may ameliorate the pro-inflammatory and pro-coagulatory processes of bacteraemia. We sought to examine the association between current use of aspirin and statins and risk for mortality as well as acute myocardial infarction and stroke after community-acquired bacteraemia (CAB).

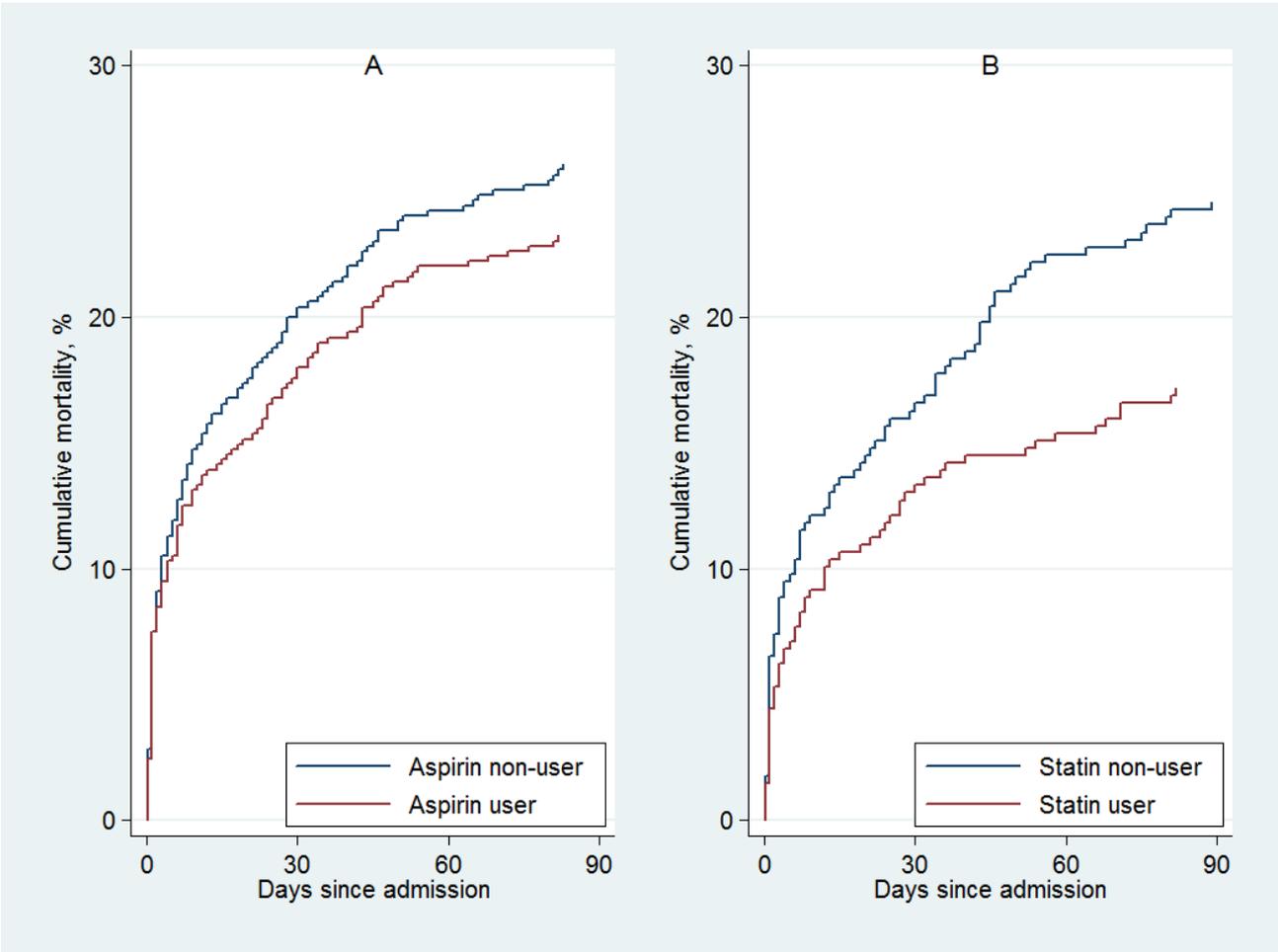
**Material/methods:** We conducted a population-based cohort study in Northern Denmark, 2003-2010, including 2,189 adult non-surgical patients who had first-time CAB on day of admission to hospital. Data on CAB, aspirin and statin use within the last 125 days, comorbidity, cardiovascular events, and vital status was ascertained from health-care databases. We used logistic regression to establish two separate propensity score matched sub-cohorts of aspirin users/non-users (n=990) and statin users/non-users (n=676). We computed the absolute risk, risk difference, and risk ratios with 95% confidence intervals (CI) for death and acute myocardial infarction and stroke within 0-30 and 0-90 days after admission for users vs. non-users in both propensity-matched sub-cohorts. Cox' regression was used for mortality rate ratios (MRR).

**Results:** For matched aspirin users vs. non-users, we found a slightly and statistically non-significantly decreased risk of death within 0-30 days (17.8% vs. 20.4%, propensity-matched risk difference, -2.4% [CI, -7.3-2.5%], propensity-matched MRR, 0.9 [CI, 0.7-1.2]) and within 0-90 days (23.2% vs. 26.1%, difference, -2.8% [CI, -8.2-2.5%], MRR, 0.9 [CI, 0.7-1.1]) after bacteraemia (Figure 1A and Table 1).

Statin use was associated with a statistically non-significant reduction in mortality during 0-30 days (13.3% vs. 16.6%, difference, -3.3% [CI, -8.6-2.1], MRR, 0.8 [0.5-1.2]), and associated with a significantly lower mortality during 0-90 days (17.2% vs. 24.6%, difference -7.4% [CI, -13.5--1.3], MRR, 0.7 [CI, 0.5-0.9]) after CAB (Figure 1B and Table 1). Neither aspirin nor statin therapy affected the risk for cardiovascular events.

**Conclusions:** Statin use, but not aspirin use, is associated with a decreased risk for death within 90 days after community-acquired bacteraemia.

**Figure 1. Mortality curves for propensity-matched patients with community-acquired bacteraemia by aspirin use (A) and statin use (B).**





**Table 1. Mortality after community-acquired bacteraemia in propensity-matched sub-cohorts by aspirin and statin use, Northern Denmark, 2003-2010.**

		<b>Dead, n/N (%)</b>	<b>Risk difference, % (95% CI)<sup>§</sup></b>	<b>MRR (95% CI)<sup>§</sup></b>
<b>0-30 days</b>	<b>Aspirin non-user</b>	101/495 (20.4)	(ref)	(ref)
	<b>Aspirin user</b>	89/495 (17.8)	-2.4 (-7.3-2.5)	0.9 (0.7-1.2)
	<b>Statin non-user</b>	56/338 (16.6)	(ref)	(ref)
	<b>Statin user</b>	45/338 (13.3)	-3.3 (-8.6-2.1)	0.8 (0.5-1.2)
<b>0-90 days</b>	<b>Aspirin non-user</b>	129/495 (26.1)	(ref)	(ref)
	<b>Aspirin user</b>	115/495 (23.2)	-2.8 (-8.2-2.5)	0.9 (0.7-1.1)
	<b>Statin non-user</b>	83/338 (24.6)	(ref)	(ref)
	<b>Statin user</b>	58/338 (17.2)	-7.4 (-13.5--1.3)	0.7 (0.5-0.9)

Abbreviations: MRR, mortality rate ratio. <sup>§</sup>Adjusted by propensity score matching on age, gender, marital status, calendar-time, comorbidities in the Charlson comorbidity index, alcohol-related diagnoses, and use of other medications.