POSTER SESSION 5

RISK FACTORS AND PREVENTION – MISCELLANEOUS

P4430
Fibrinogen decrease in Type D CAD patients (SPIRR-CAD)

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Introduction: Depression is frequent in coronary artery disease patients (about 25% of all patients) and has recently been defined as an independent risk factor for CAD incidence and prognosis by several independent metaanalyses. Therefore, treatment of depression represents a major focus in CAD patients. However, the question how depression can effectively be reduced in CAD patients remains unanswered since large scale trials such as ENRICHD were disappointing, and a recent Cochrane analysis reported unambiguous results on type of psychological intervention.
The German multicentre SPIRR-CAD trial found that only the subgroup of Type D personality patients showed a significant benefit from an 18-months-group psychotherapy intervention regarding reduction of depression scores (Herrmann-Lingen et al 2016). We hypothesised that reduction of depression would be mirrored in reduction of fibrinogen levels since a hypercoagulable state has been linked to psychological stress and depression.
Methods: We analysed plasma fibrinogen levels (g/l) in N=109 elderly patients with stable coronary artery disease (CAD) and mild to moderate levels of depression (as defined by HADS depression scores $\geq$8) from the SPIRR-CAD trial (Herrmann-Lingen et al 2016). Repeated measures ANOVA was performed (two time points: before (T0b) and after 18 months of group therapy intervention (T3); with two groups: Type D versus non Type D) with fibrinogen levels (g/l) as dependent variable.
Results: 84 of the patients were male (77%), 25 female (23%), mean age was 66.75 y (SD 4.0), range 61–74 years. N=60 were Type D positive. Repeated measures ANOVA yielded a significant time effect (F[df1]=7.290; p=0.008), referring to a decrease of fibrinogen levels from T0b to T3. We also saw a significant time by group interaction (F[df1]=4.139; p=0.044) referring to a decrease of fibrinogen levels in the Type D patients (from 3.81±1.2 to 3.29±1.1 g/l) versus no significant change in the non Type D patients (3.44±1.2 to 3.37±1.1 g/l). Fibrinogen levels did not significantly differ between Type D versus non Type D patients (statistical trend at T0b for higher levels in Type D patients; t-test: p=0,062; p$>$0.1 at T3).
Conclusion: Parallel to a differential benefit from an 18-months group psychotherapy intervention with reduction of depression Type D patients showed a reduction of plasma fibrinogen levels versus absence of significant change in the non Type D patients. Our hypothesis of parallel improvement of psychological and biomarker profile mirroring subclinical inflammation and/or procoagulable state may hereafter be seen as confirmed. However, data need to be interpreted with caution since multiple confounders may have an impact, and number of included patients and net concentrations were small.
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P4431
The effect of schizophrenia on length of in-hospital stay and major adverse cardiac events following acute coronary syndrome in Denmark

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Background: The relationship between schizophrenia and acute coronary syndrome (ACS) has already been established. This study aims to investigate the difference in length of in-hospital stay (LoS) between a population with schizophrenia and a psychiatric healthy control (PHC) population following admission for a first ACS.
Methods: Data for this retrospective study was collected from three nationwide databases in Denmark; The Danish Civil Registration System, the National Patient register and the Danish Psychiatric Central Register. Patients diagnosed with a first ACS (unstable angina ICD-10 I20.0, NSTEMI ICD-10 I21.4 and STEMI ICD-10 I21.0-I21.3) between 2000–2014 were identified and screened for an additional diagnosis of narrow spectrum schizophrenia ICD-10 F20. The patients were matched 1:2 to a PHC population on gender, age and year of first ACS diagnosis. The LoS, as well as the effect of schizophrenia on major adverse cardiac events (MACE: stroke, reinfarction and all-cause mortality) was investigated using cox regression analyses.
Results: A total of 1,572 patients were analysed (schizophrenia: n=524), 65.27% of the population were males and the mean age was 61.13 years. There was no difference in LoS (p$>$0.05) between the populations. Patients with schizophrenia had a higher prevalence of cardiac risk factors such as anemia and diabetes mellitus. Having schizophrenia had a significant effect on stroke (HR 1.47, 95% CI: 1.29–1.68)) and all-cause mortality rates (HR 2.69, 95% CI: 2.25–3.20). The results for the individual ACS diagnoses can be found in Table 1.

Table 1

	MACE	Stroke	Reinfarction	All-cause mortality
Unstable angina n (%)	96 (78.05)*	17 (13.82)*	68 (55.28)	52 (42.28)*
PHC	157 (63.82)	13 (5.28)	135 (54.88)	40 (16.26)
HR (95% CI)	1.37 (1.06–1.77)	3.86 (1.85–8.07)	1.06 (0.79–1.41)	3.41 (2.24–5.17)
NSTEMI n (%)	162 (67.50)*	11 (4.58)	55 (22.92)	123 (51.25)*
PHC	255 (53.13)	25 (5.21)	151 (31.46)	130 (27.08)
HR (95% CI)	1.37 (1.12–1.67)	1.06 (0.52–2.16)	0.78 (0.57–1.06)	2.33 (1.82–2.99)
STEMI n (%)	135 (67.16)*	14 (6.97)	45 (22.39)	109 (54.23)*
PHC	221 (54.98)	33 (8.21)	145 (36.07)	90 (22.39)
HR (95% CI)	1.44 (1.16–1.78)	1.21 (0.65–2.27)	0.75 (0.53–1.04)	3.20 (2.42–2.24)
Total ACS n (%)	360 (68.70)*	36 (6.87)*	148 (28.24)	258 (49.24)*
PHC	565 (53.91)	59 (5.63)	377 (35.97)	246 (23.47)
HR (95% CI)	1.47 (1.29–1.68)	1.62 (1.07–2.45)	0.89 (0.73–1.07)	2.69 (2.25–3.20)

The effect of schizophrenia on MACE (major adverse cardiac events: stroke and reinfarction and all-cause mortality rate). Shows the results for patients with schizophrenia diagnosed with unstable angina, NSTEMI or STEMI individually as well as the results for the schizophrenia population diagnosed with any of the ACS diagnoses as a whole (total ACS). The results for the psychiatric healthy control (PHC) and the hazard ratios (HR) are placed immediately under. Adjusted for age, sex, hypertension, hyperlipidemia, diabetes mellitus and anemia. *p$<$0.05.

Conclusion: Schizophrenia did not impact the length in-hospital stay rates following first acute coronary syndrome. However, a hazardous effect of schizophrenia on stroke and all-cause mortality was found.
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P4432
Cardiovascular autonomic neuropathy is present in individuals with schizophrenia

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Background: Cardiovascular autonomic neuropathy (CAN) is a significant cause of morbidity and mortality, due to a high-risk of cardiac arrhythmias, silent myocardial ischemia and sudden death. We aim to assess the prevalence of CAN in patients with schizophrenia compared with matched controls.
Hypothesis: Detection of CAN in individuals with schizophrenia compared with age and sex-matched controls without schizophrenia by simple non-invasive test.
Design: Cross sectional observational study.
Methods: Patients with chronic schizophrenia were matched on sex and age at screening with psychiatrically healthy. Cardiovascular autonomic neuropathy was assessed using standardised cardiovascular reflex testing (CART): (1) Expiration to inspiration (E:I), (2) Respond to standing (R:S), (3) Valsalva manoeuvre (VM). Early CAN is defined as the presence of one abnormal reflex test and manifest CAN is defined as two or more abnormal tests. Heart rate variability (HRV) was analysed of time and frequency domain from 5 min supine resting.
Results: A total of 28 (57%) patients with schizophrenia showed abnormal reflex tests among the 46 patients with schizophrenia. 18 were diagnosed with abnormal CAN, including 7 with manifest CAN. E:I and R:S were significantly lower in patients compared to controls. Even after adjustment for mediator variables CAN remains significant in these patients.
Conclusion: Cardiovascular autonomic neuropathy is common in patients with schizophrenia. Testing for CAN could be a clinically useful tool for detecting early stages in cardiovascular disease.

P4433
Transgenerational transmission of trauma; cardiac impact (the treegenes study)

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Background: Chronic psychological trauma may impact the heart and stimulate the development of a premature cardiovascular disease (CV).However, it still remains unclear if transgenerational transmission of trauma (TTT) impacts the heart. Observations in military veterans have shown that the circadian CV rhythm is altered in post-trauma cases. We focussed on TTT impact on the heart first-generation offspring. The TreeGenes study (The Netherlands) studied the cardiovascular impact of trauma in three generations of World War II survivors. We assessed in all cases the psycho-CV impact, epigenetic changes and did in-depth interviews focussing on resilience. We report the findings of cardiovascular impact in offspring by sharing results on 24-hour blood pressure measurements and 24-hour heart rate analysis. Hypothesis: TTT disturbs the circadian CV balance in offspring.
Methods: 38 cases underwent a 24-hour blood pressure and an ambulant heart rate monitoring procedure, in addition, to the interview. Matched controls for age and gender without a traumatic past in the first generation were selected and did

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