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Cardiovascular Disease in a Large Incident Cohort of Early Inflammatory Arthritis

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SESSION INFORMATION

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Session Title: Rheumatoid Arthritis - Clinical Aspects Poster II

Session Time: 9:00AM-11:00AM

Cardiovascular
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Background/Purpose:
Rheumatoid Arthritis (RA) is associated with an increased risk of cardiovascular disease (CVD). The aim of this study is to determine the incidence and predictors of CVD in Early Inflammatory Arthritis (EIA) from the Canadian early arthritis cohort (CATCH).

Methods: CATCH is a multicentre, prospective inception cohort of patients with EIA. Cardiovascular disease (CVD) was defined as an acute coronary syndrome, percutaneous or surgical intervention for coronary artery disease, stroke, transient ischemic attack, peripheral vascular disease requiring surgical intervention or death secondary to CVD. Pre-existing diagnoses of CVD, risk factors and medications for CVD were collected at baseline by physician. Incident CVD events and cardiac medications after study enrollment were self-reported by patients. Stepwise logistic regression was used to identify predictors for CVD.

Results:
2652 patients were enrolled in the study with a mean follow-up of 3.4 (SD 2.1) years. At baseline, 180 (7%) had pre-existing CVD. During the course of follow-up there were 62 new CVD events in 57 subjects. There were a total of 6 deaths (1 secondary to CVD). The incidence rate of CVD for years 1, 2, 3, 4 and 5 of the study, respectively were: 2.3, 4.4, 15.4, 10.4, 10.8 per 1000 person-years. Patients with new CVD

events were older, more likely male and have higher rates of traditional CVD risk factors (Table 1). Arthritis-related factors were not significantly associated with the risk of CVD. Independent predictors of CVD were male gender (OR 1.8 (95% CI: 1.0-3.0), dyslipidemia (OR 1.8 (95% CI: 1.1-3.2)), hypertension (OR 2.7 (95% CI: 1.6-4.6)) and the use of non-steroidal anti-inflammatories (NSAIDs) (OR 3.2 (95% CI: 1.8-5.6). Less than 25% of subjects with a CVD diagnosis reported taking aspirin or cholesterol-lowering drugs during the follow-up period.

Conclusion:
The rate of CVD events in patients with EIA was higher later in the disease course. CVD appears to be under-treated and is independently associated with traditional CVD risk factors and the use of NSAIDs.

Table 1: Baseline characteristics of EIA patients with a new CVD event versus those that did not have a new CVD event

	New CVD	**No New CVD**	**p-value**
N	57	2595	
Age, mean years (SD)	61.2 (13.6)	53.3 (14.8)	<0.0001
Female	31 (54)	1874 (72)	0.0037
Symptom Duration, days mean (SD)	234.8 (129.0)	184.7 (115.9)	<0.0001
Ever Smoker[a]	41 (72)	1441 (56)	0.0136
RA criteria[b]	52 (93)	2218 (86)	0.1314
Seropositive[c]	29 (76)	1150 (67)	0.2307
DAS28, mean (SD)	4.87 (1.50)	4.66 (1.45)	0.3017
HAQ, mean (SD)	0.86 (0.67)	0.88 (0.69)	0.8130
Erosions[d]	15 (31)	480 (23)	0.2375
CRP, mean (SD) (mg/L)	14.8 (17.9)	13.9 (17.9)	0.7004
ESR, mean (SD)	26.5 (22.8)	26.4 (22.7)	0.9820
Diabetes	9 (16)	210 (8)	0.037
Hypertension	31 (54)	703 (27)	<0.0001

Dyslipidemia	19 (33)	426 (16)	0.0007
DMARDs	50 (88)	2128 (82)	0.2800
Methotrexate	39 (68)	1712 (65)	0.5458
Biologics	3 (5)	52 (2)	0.1192
Corticosteroids	32 (56)	1271 (49)	0.2674
NSAID	14 (25)	234 (9)	<0.0001

[a]Defined as past or present smoker

[b]Meets ACR 1987 RA criteria or ACR/EULAR 2010 RA criteria

[c]N=1752 with available data on antibodies; seropositive defined as Rheumatoid Factor or Anti-Citrullinated Peptide Antibody positive

[d]N= 2103 with available data on presence of erosions on plain radiographs

EIA= Early Inflammatory Arthritis, DAS28= Disease Activity Score 28, HAQ= Health Assessment Questionnaire Score, ESR= Erythrocyte Sedimentation Rate, CRP= C-Reactive Protein, , ACR=American College of Rheumatology, RA= Rheumatoid Arthritis, EULAR= European League Against Rheumatism, DMARDs= Disease Modifying Anti-Rheumatic Drugs, NSAID= Non-Steroidal Anti-Inflammatories

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Disclosure: L. Barra, Roche Pharmaceuticals, 5,Abbott Laboratories, 5,Amgen, 5; **J. E. Pope**, Abbott,Amgen, Pfizer, Roche, Janssen, BMS, UCB, 5; **C. Hitchon**, None; **G. Boire**, None; **D. Lin**, None; **J. C. Thorne**, Amgen, Canada, 5; **D. Tin**, None; **E. C. Keystone**, Janssen Inc., 2,Abbott/AbbVie, 5,Amgen, 2,Bristol-Myers Squibb, 5,Janssen Inc., 5,Hoffmann-La Roche, Inc., 5,Janssen Inc., 2,Janssen Inc., 5,Merck Pharmaceuticals, 5,Merck Pharmaceuticals, 5,Pfizer Pharmaceuticals, 5,Pfizer Pharmaceuticals, 5; **B. Haraoui**, Abbott, Amgen, BMS, Janssen, Pfizer, Roche and UCB Pharma, 2,Abbott, Amgen, BMS, Janssen, Pfizer, Roche and UCB Pharma, 5,Abbott, Amgen, BMS, Janssen, Pfizer, Roche and UCB Pharma, 8; **V. Bykerk**, None.

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