Results of a Screening Program to Detect Inflammatory Arthritis in a First Nations Community

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BACKGROUND

- Rheumatoid Arthritis (RA) and Systemic Lupus Erythematosus (SLE) are at least twice as prevalent in First Nations populations of North America, and are more severe in phenotype.
- Barriers to accessing primary and specialist care are recognized, which may impact outcomes.

OBJECTIVES

- Institute an arthritis screening program in a First Nations community with a large suspected burden of inflammatory arthritis, to enable diagnosis and treatment at an earlier stage of disease.
- Determine the prevalence of inflammatory arthritis in an Alberta First Nations community.
- Determine the prevalence of musculoskeletal symptoms and resulting functional status in an Alberta First Nations community.
- Determine the prevalence of inflammatory arthritis related autoantibodies in an Alberta First Nations community.

METHODS

- Recruitment from a variety of community sites (community events, businesses, newspaper advertising, health centre, home care workers, primary care referrals)
- Weekly clinic held, patients self-refer for assessment
- Screening visit includes standardized history and physical examination by a rheumatologist and completion of HAQ questionnaire
- Rheumatoid factor (Immunoturbidmetric assay on Integra 800), anti-CCP (CCP 3 ELISA, INOVA Diagnostics), ANA (HEp-2 cells, ImmunoConcepts, Sacramento, 1:160) and ENA (ALBIA, BMD Fidis, Paris)
- Funding:

RESULTS

- 51 clinics held between June 2011 to August 2012
  - 162 participants and 312 visits
- Participant demographics:
  - 92% First Nations, 76% female, mean age 51 years
- Family history:
  - RA 49%
  - SLE 15%
- Most frequent pain location:
  - Hands 85%
  - Knees 74%
  - Lumbar spine 63%

INFLAMMATORY ARTHRITIS

	Established Cases	New Cases
Rheumatoid Arthritis	7	12
Lupus	6	2
Psoriatic arthritis	2	4
Spondyloarthritis	1	0
Undifferentiated Arthritis	0	7
Crystal (suspected)	1	1
Juvenile Idiopathic Arthritis	1	1
TOTAL	19	27

Mean Scores	Established Cases	New Cases
Tender Joints (28)	6.5	10.4
Swollen Joints (28)	4.8	9.3
DAS28	3.67	4.33
Morning Stiffness (minutes)	326	136
Pain (0-10)	6.4	6.2
HAQ	1.42	1.1

NON-INFLAMMATORY ARTHRITIS CONDITIONS

Condition	
All peripheral joint osteoarthritis	89 (55%)
Degenerative Disc Disease/ Mechanical Back Pain	30 (19 %)
Tendonitis	36 (22%)
Patellofemoral pain syndrome	12 (7%)
Internal derangement of knee	10 (6%)
Myofascial pain	6 (4%)
Neurologic condition	12 (7%)
Fibromyalgia	3 (2%)

Mean Scores	
Pain (0-10)	5.4
Fatigue (0-10)	5.2
Morning stiffness (minutes)	163
HAQ	0.93

AUTOANTIBODIES
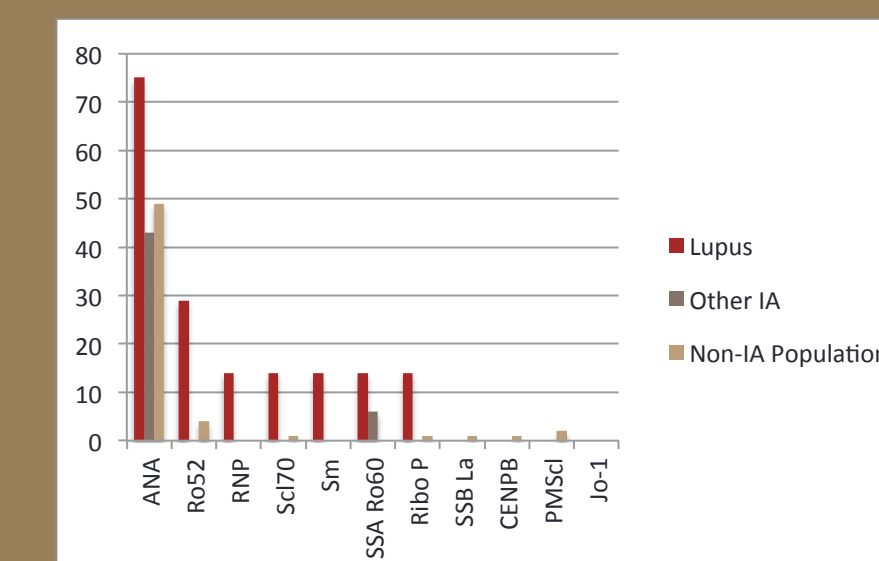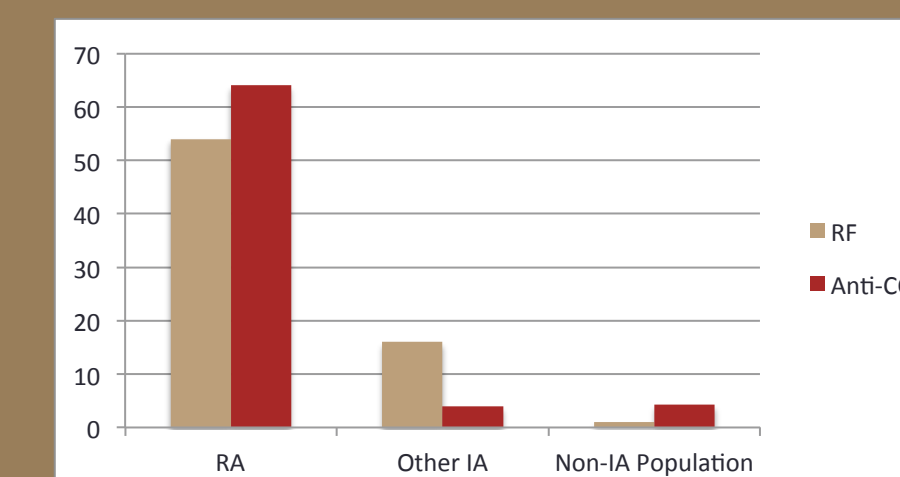
CONCLUSIONS

- Community screening programs are successful in detecting new cases of inflammatory arthritis and returning established patients to active care.
- The variety of non-inflammatory arthritis conditions seen highlight the need for multidisciplinary teams and physiotherapy services in the community.
- The high proportion of participants with ANA positivity in the absence of existing inflammatory arthritis conditions is unexplained.