THU0676  A SYSTEMATIC REVIEW AND META-ANALYSIS OF VIRAL EXPOSURES AS A RISK FACTOR FOR RHEUMATOID ARTHRITIS

F. Kudravč1, M.R. Speckley2, J.E. Pope3. 1Epidemiology and Biostatistics; 2Epidemiology and Biostatistics, Schuchl School of Medicine and Dentistry, Western University; 3Division of Rheumatology, St. Joseph’s Health Care, Schuchl School of Medicine and Dentistry, London, Canada

Background: Rheumatoid arthritis (RA) is an autoimmune disease with a complex and poorly understood etiology. Development of autoimmune disease stems from a combination of innate, genetic, hormonal and environmental factors. Infections are viewed as triggers of some autoimmune disorders, including RA.

Objectives: Different viral exposures have been implicated in the etiology of RA via several mechanisms of immune activation, such as molecular mimicry. The purpose of this systematic review was to summarise the evidence relating to the association between putative viral exposures and the development of RA.

Methods: A systematic literature search was conducted using MEDLINE-OVID, EMBASE-OVID, PUBLMED and Cochrane library databases. Articles were included if they were case-controls, cross-sectional or cohort studies and were published in English. Case-series were included if there was a lack of other study designs.

Results: Of 6724 citations, 78 studies were selected for review, and 48 were included in meta-analysis. Studies had poor quality. Based on the IgG antibodies (n=12 studies) and viral DNA detection (n=3 studies), the odds of parvovirus B19 (PV/B19) infection were increased in RA patients than in controls (odds ratio (OR) (95% CI)=1.77 (1.11; 2.80), p=0.02, OR (95% CI)=3.53 (1.00; 12.53), p=0.05 for PV/B19 IgG and DNA, respectively). For Epstein-Barr virus (EBV), patients with RA had not significant OR of anti-Epstein-Barr nuclear antigen (EBNA) (n=17 studies, OR (95% CI)=1.05 (0.79; 1.39), p=0.75), but significant OR of anti-viral capsid antigen (VCA) (n=18 studies, OR (95% CI)=1.5 (1.07; 2.10), p=0.02) and anti-early antigen (EA) (n=11 studies, OR (95% CI)=2.74 (1.27; 5.94), p=0.01). Cytomegalovirus (CMV) was not associated with RA (n=13 studies, OR (95% CI)=1.24 (0.78; 1.95), p=0.36). Chronic hepatitis B (HBV) was not associated with RA in 5 case-control (OR (95% CI)=1.37 (0.83; 2.25, p=0.22) and 1 cohort studies (HR 1.09 (0.74, 1.63), p=0.5), p=0.05). Chronic hepatitis C (HCV) was associated with increased risk of RA in 7 case-control (OR (95% CI)=2.82 (1.35; 5.90, p<0.006) and 1 cohort studies (HR 2.03 (1.27, 3.22), p<0.01). There seem to be a risk of persistent arthritis after Chikungunya fever (CHKV) (n=2 studies, OR (95% CI)=90 (15.2; 134.3).

Conclusions: Studies about the risk of RA after viral exposures suffer from inconsistent methodological quality. There is a risk of RA after Parvo B19 infection and possibly HCV but not EBV or HBV. There seems not to be a risk of RA after EBV infection. CHIKV is associated with the persistent inflammatory arthritis. There is not enough evidence to support an association between some viruses and RA development, but they probably lead to RA in genetically susceptible individuals.

Disclosure of Interest: None declared


THU0677  TRENDS OF VENOUS THROMBOEMBOLISM AMONG SELECT RHEUMATOLOGIC DISEASES: AN AUDIT OF LARGE NATIONAL US DATABASE

D.R. Poudel1, R. Dhill1, P. Paudel2, S. Basnet1, P. Sharma1, P. Shrestha1, P. Karmacharya1, 2Internal Medicine, Tower Health System, Reading Hospital, West Reading; 3Internal Medicine, Berkshire Medical Center, Pittsfield; 4Division of Rheumatology, Mayo Clinic, Rochester, USA

Background: Venous thromboembolism (VTE) is 3rd commonest cause of cardiovascular deaths and encompasses deep-venous thrombosis (DVT) and pulmonary embolism (PE). Rheumatologic diseases have been found to be associated with an increased risk of VTE among hospitalised patients.

Objectives: To describe the trend of VTE among select rheumatologic diseases over 15 years.

Methods: We used National Inpatient Sample (NIS) database for years 2000–2014 to identify adults≥18 years with select rheumatologic diseases and VTE based on ICD-9 codes. Prevalence was age-sex adjusted against US census population data. STATA was used for querying database and Joinpoint regression...