Nature Reviews Rheumatology | Published online 12 May 2016

IN BRIEF

SYSTEMIC LUPUS ERYTHEMATOSUS

Pilot study reveals placental abnormalities in SLE

Women with systemic lupus erythematosus (SLE) are at an increased risk of pregnancy complications. Similar histological abnormalities have previously been found in placental tissue from women with SLE and those with pre-eclampsia. Given the data implicating neutrophil extracellular traps (NETs) in SLE-associated vasculopathy, Marder *et al.* hypothesized a role for NETs in pregnancies complicated by these conditions. Immunohistochemical analysis revealed significantly increased numbers of neutrophils and NETs in the intervillous spaces of placental tissue from women with SLE ($n = 10$) and women with pre-eclampsia ($n = 11$) compared with that from healthy controls ($n = 10$). The presence of NETs correlated with vasculopathy and acute maternal inflammation, suggesting that NETs might contribute to placental pathology in SLE and pre-eclampsia.

ORIGINAL ARTICLE Marder, W. *et al.* Placental histology and neutrophil extracellular traps in lupus and pre-eclampsia pregnancies. *Lupus Sci. Med.* http://dx.doi.org/10.1136/lupus-2015-000134 (2016)

CONNECTIVE TISSUE DISEASES

X chromosome dose contributes to sex bias

Similarly to other autoimmune diseases, primary Sjögren syndrome (pSS) is more common in women than in men; however, the mechanisms underlying this sex bias are not fully understood. Harris *et al.* investigated the prevalence of Klinefelter syndrome — a condition in which individuals are phenotypically male but carry two or more X chromosomes — in healthy controls and in patients with pSS, systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA). The prevalence of Klinefelter syndrome was significantly higher than expected among patients with pSS (4 in 136) or SLE (8 in 306), but not among healthy controls (1 in 1,254) or patients with RA (0 in 363). These data suggest that X chromosome dose contributes to the sex bias observed in certain autoimmune conditions.

ORIGINAL ARTICLE Harris, V. M. *et al.* Klinefelter's syndrome (47,XXY) is in excess among men with Sjögren's syndrome. *Clin. Immunol.* http://dx.doi.org/10.1016/j.clim.2016.04.002 (2016)

INFLAMMATORY ARTHRITIS

Intra-articular DC therapy reported safe in phase I

Bell *et al.* report the results of the first randomized controlled phase I trial to evaluate the feasibility, safety and tolerability of intra-articular administration of autologous tolerogenic dendritic cells (DCs) in patients with inflammatory knee arthritis. $CD14^+$ monocytes were differentiated into tolerogenic DCs and loaded with autoantigens from autologous synovial fluid; tolerogenic DC manufacture was successful for nine of the ten patients. These nine patients were divided equally into three groups that each received a different dose of tolerogenic DCs after saline irrigation of the target knee. The primary outcome of the study was met in all nine patients: none showed flare of disease in the treated knee at day 5. Adverse events considered to be potentially related to tolerogenic DC therapy were mild or moderate, and no dose–response relationship was observed. Although exploratory analyses revealed evidence suggestive of treatment efficacy in a proportion of patients, further investigation in larger cohorts is required.

ORIGINAL ARTICLE Bell, G. M. *et al.* Autologous tolerogenic dendritic cells for rheumatoid and inflammatory arthritis. *Ann. Rheum. Dis.* http://dx.doi.org/10.1136/annrheumdis-2015-208456 (2016)