

LPS raised cytokine (TNF- α , IL-1/IL-1Ra, IL-6, IL-8) secretion resulting in higher response in OA than in RA tissues. Upon some (TNF- α , IFN- γ , IL-1) but not other (IL-15, IL-17, IL-23) cytokines treatment secretion of tested cytokines raised significantly. Interestingly, TNF- α triggered higher IL-6 secretion in AA than in ScA (both in RA and OA), while IL-1 was more potent inducer of IL-6 and IL-8 release from OA than RA adipose tissues. Importantly, upon TNF- α (ScA) and IFN- γ (AA) treatment IL-1/IL-1Ra ratio was higher in RA than in OA tissues. Adiponectin levels were unaffected by cytokines, while leptin secretion was raised (by IL-1 and IFN- γ) more potently in OA than RA tissues.

Conclusion The authors reported that (i) upon proinflammatory cytokines (TNF- α and IFN- γ) stimulation IL-1/IL-1Ra ratio (promoting joint destruction) was higher in RA tissues; (ii) adipose tissues obtained from OA patients secreted more adiponectin (anti-inflammatory adipokine); (iii) upon IL-1 stimulation OA tissues produced more proinflammatory cytokines (IL-6 and IL-8).

The authors' results give direct evidence that adipose tissues from RA and OA patients differ in cytokine and adipokine production associated with proinflammatory and destructive capability.

A215 ADIPOSE TISSUES FROM RA AND OA PATIENTS DIFFER IN CYTOKINE AND ADIPOKINE PRODUCTION

Plebanczyk M, Janicka I, Musiałowicz U, Burakowski T, Maslinski W, Malyk P, Kontny E *Institute of Rheumatology, Warsaw, Poland*

10.1136/ard.2010.149021.25

Objectives Cytokines and adipokines play fundamental role in synovial inflammation and articular destruction. Articular and subcutaneous adipose tissues have been suggested to play a role in inflammatory joint diseases. The aim of present work was to investigate whether adipose tissues from rheumatoid arthritis (RA) and osteoarthritis (OA) patients differ in adipokine and cytokine production.

Materials and methods Articular (AA) and subcutaneous (ScA) adipose tissue explants, obtained from RA and OA patients who were undergoing knee joint replacement surgery, were cultured (100 mg/ml) for 18 h in medium (DMEM) alone or in the presence of lipopolysaccharide (LPS) (1 μ g/ml) or cytokines: tumour necrosis factor (TNF)- α interferon (IFN)- γ and IL-1, IL-15, IL-17 or IL-23 (10 and 40 ng/ml). Concentrations of TNF- α , IL-6, IL-8, IL-1, IL-1Ra, adiponectin and leptin were measured in culture supernatants by ELISA.

Results Spontaneous secretion of adiponectin was higher in OA than in RA adipose tissues, while production of other cytokines was similar.