

Patognomic corelations between serum adiponectine levels and vascular endothelial growth factor in patients with knee arthritis secondary to lupus and reumatoid arthritis

Summary

Keywords:Adiponectine; Cluster of DifferentiationCD31;Rheumatoid Arthritis;Lupus;Vascular Endothelial Growth Factor VEGF;Knee Arthritis

Introduction:Rheumatoid Athritis,RA and Lupus are sever conditions in which all joints are usually affected .In our research we tried to establish if there is a connexion between serum levels of adiponectine , a hormon secreted by adipocytes and the pain - joint function in a group of patients which is positive diagnosed for RA and Lupus compared to another OA patients group and also to identiefy , if there is a pattern in the development of the cartilage distructions which would be typical for RA concerning the expression of VEGF and CD31

Materials and methods:In 10 patients with rheumatoid arthritis (RA) and 5 with osteoarthritis (OA), we examined the aspects of synovium and cartilage histology in patients with OA and RA. For the study of neoangiogenesis we chose anti-VEGF and anti-CD31 antibodies, their immunohistochemical expression was examined both in synovium and cartilage, to determine differences between the two types of lesions.In other two studies , first levels of serum adiponectine determined with specific ELISA technique ,was compared between two groups of patients , one with R.A.and Lupus and the other one with arthritis to see if different levels would corelate with disease activity and second in a group of patients positive diagnosed with RA we compared serum levels of adiponectine with knee joint function using the Oxford Knee Score Chestionnary.

Results:

In the case of RA, synoviocytes and pannus VEGF expression was observed focally. In contrast, OA with marked villous proliferating synovium, synoviocytes showed diffuse positivity for VEGF. Pannus was also marked diffuse.

Ther statistically significant differences between the group of patients with RA compared to those with OA regarding the adiponectine serum levels which were significant higher in

patients with RA-mean value in RA-19718.50IU/Lupus -16850.90 IU compared to the group with OA-4836.25IU which shows high levels of adiponectine in RA and Lupus patients . as serum adiponectin levels were significantly higher compared to relative values, up to 7-8 times normal in patients with RA and Lupus, resulting values making statistical interpretation, and comparison with control group to be beyond doubt

Also in the group of patients with RA the levels of adiponectine which were 18762,63 IU/ 7709,90 IU have been positive correlated in patients with knee arthritis with low scores in the OKS-12,07/36.20 Points which demonstrates major pro inflammatory joint effects of adiponectine .

Conclusions:

If these findings and histological differences will be proven experimentally, anti-angiogenic therapy could be added to Rituximab (anti-CD20), with promising results in inhibition of angiogenesis, by local intrarticular injection in patients with RA. In patients with OA, antiangiogenic therapy doesn't seem to be the drug of choice for the future.

Adiponectine serum levels in patients with RA and Lupus are both high compared to knee arthritis patients and they are also correlated with joint damage, poor joint function and resistance to treatment.

The direct consequence of this is that the intraarticular events in the group of patients with rheumatoid arthritis differ from those with higher serum levels of adiponectin, are more serious and depend on clinical symptoms, compliance with treatment and therapeutic strategy which leads to the question if adiponectin inhibiting treatment would be an option in the future.

