Metabolic and inflammatory links to rotator cuff tear in hand osteoarthritis

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Background: Rotator cuff tear (RCT) and hand osteroarthritis (HOA) are commonly accompanied because they share a similar pathogenesis. However, there was no previous study investigating the relationship between RCT and HOA. **Objectives:** To estimate the prevalence and associated factors of RCT in patients with HOA. **Methods:** In this study, we enrolled 1150 individuals who lived in Gyeongnam province in Korea from June 2013 to December 2015. Physical examinations were performed by rheumatologists and orthopedists. Plain radiography of hands and magnetic resonance imaging (MRI) of shoulders were performed in all participants. Serum levels of high sensitive C reactive protein (hsCRP) and high density lipoprotein (HDL) were checked. RCT was diagnosed by clinical examination and MRI findings. Diagnosis of HOA was made by the 1990 American College of Rheumatology classification criteria. Severity of radiographic HOA was assessed by sum of Kellgren-Lawrence (KL) grades of total involved joints on plain radiographs. **Results:** The prevalence of RCT was higher in patients with HOA group (192/307, 62.5%) than those without HOA (410/827, 49.5%, $p<0.001$). Among 307 with HOA, patients with RCT were older (62.69±7.04 vs. 59.11±7.69, $p<0.001$) and showed higher hsCRP (1.51±3.78 vs. 0.67±0.70, $p=0.004$) and lower HDL levels (55.66±15.46 vs. 60.48±12.45, $p=0.003$) compared to those without RCT. Multiple logistic regression analysis showed significant associations of age (odds ratio [OR] 1.06; 95% confidence interval [CI] 1.016 - 1.099), serum levels of hsCRP (OR 1.37, CI 1.043 - 1.794), and low HDL (male <50mg/dL, female <40mg/dL) (OR 2.16, CI 1.160 - 4.005) with RCT in HOA patients. **Conclusions:** The prevalence of RCT is high and age and serum levels of hsCRP and HDL have predictive roles in the development of RCT in HOA patients.

A Case of Probable Tolosa-Hunt Syndrome with Ophthalmoplegia in a Patient with Psoriatic Arthritis

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Painful ophthalmoplegia consists of periorbital or hemicranial pain with ipsilateral ocular motor nerve palsies. It can be resulted from various causes such as neoplastic, vascular, inflammatory or infectious disease. One of the etiologies of painful ophthalmoplegia is Tolosa-Hunt syndrome (THS), an idiopathic granulomatous inflammation of the cavernous sinus or orbital apex. A few cases of THS associated with autoimmune disease have been reported so far but reports on THS associated with connective tissue diseases were very rare and even cases with psoriatic arthritis have not been reported yet. Herein we report a case of probable THS in a patient with psoriatic arthritis. A 37-year-old male presented with ocular pain and headache for 7 days. The pain developed in both eyes and right hemicranial area and it accompanied by dizziness, nausea, and vomiting. The patient was diagnosed with psoriatic arthritis involving spine and peripheral joints 5 years ago. On neurologic examination, pupils were anisocoric (5/3) but both light reflexes were prompt. All extraocular muscle movements except right lateral gaze were limited in the right eye. Complete ptosis was also observed in the same side. These findings were consistent with paralysis of 3rd and 4th cranial nerves. Routine laboratory tests including complete blood cell count and chemistry profile were normal. CRP was 0.08mg/dL and ESR was 8mm/hr. ANCA, ANA, and rheumatoid factor were all normal. On orbital MRI, there were no remarkable findings in the bilateral orbits and cavernous sinuses. THS can be diagnosed in a patient showing characteristic neurologic findings (paresis of the 3rd, 4th, and/or 6th cranial nerve) with eye pain by demonstrating granulomatous inflammation in biopsy or MRI if other etiologies have been excluded. But biopsy is nearly impossible due to anatomical location of the lesion and sometimes there could be no abnormal findings to be examined on brain imagings with THS. Based on history and symptoms we considered the patient as having THS. High dose prednisone (60 mg/day) was administered and his symptoms were resolved rapidly with the treatment.