FRI0257 CHANGES IN SKELETAL MUSCLES IN PATIENTS WITH KNEE JOINT REPLACEMENT

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Background Knee joint replacement is used as a routine surgical procedure in the treatment of rheumatoid diseases or arthrosis. However, systematical studies on the affected muscles are rare.

Objectives In the present systematic study we analysed the pathological changes in the vastus medialis muscles in 108 patients with rheumatoid arthritis and gonarthrosis who underwent knee joint replacement. The aim of the current study was to examine possible differences in both entities with respect to kind and degree of muscle changes and to the state of innervation/denervation which might be important for the therapeutic effect of the arthroplasty.

Methods Serial cross-cut cryostat sections were stained by H&E and Gomori's trichrome and submitted to routine histochemical preparations including NADH/TR, ATPase after preincubation at pH 4.6 and 9.4, oil-red O, periodic acid Schiff and acid phosphatase. Immunohistochemistry was performed using commercially available monoclonal antibodies (Mab) against neonatal myosin and neural cell adhesion molecule CD56 for the identification of regenerating fibres. In addition, the Mab against HLA-ABC was applied in order to detect the up-regulation of MHC Class I antigen on the muscle fibres.

Results Lipomatosis was striking in the majority of both groups. Regenerating fibres also were detectable in both entities. As a trend, patients with gonarthrosis mainly showed atrophy of type 2 fibres indicating inactivity due to muscle or joint pain. Patients with rheumatoid arthritis commonly revealed atrophy of both type 1 and 2 fibres and fibre type grouping consistent with neurogenic muscular atrophy indicating a systemic disease. Vasculitis was only occasionally detected. In rheumatoid arthritis, however, up-regulation of MHC Class I antigen was regularly seen reflecting the underlying autoimmune disease. A small percentage of cases showed corticoid myopathy with atrophy of type 2 fibres in combination with increased lipid content of type 1 fibres.

Conclusion

OP0129 GREATER TROCHANTERIC PAIN SYNDROME. ULTRASOUND AND CLINICAL CORRELATIONS

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Background Greater trochanteric pain syndrome consists of a common clinical syndrome including ?classical? trochanteric bursitis but also gluteus medius pathology, with main clinical features being pain and tenderness over the lateral aspect of hip.

Objectives To assess the prevalence of trochanteric bursitis and gluteus medius tendonitis by ultrasound examination, together or in isolation, in patients with greater trochanteric pain syndrome and to investigate whether different clinical features could be related to ultrasound findings.

Methods 36 (34F/2M) patients with greater trochanteric pain syndrome were studied retrospectively. A coxofemoral or lumbar origin of pain was ruled out in all these patients. The following variables were used: age, disease duration, presence of obesity or leg length inequity, pain type (use-related/at rest) and location

(trochanter, buttock or both), Trendelenburg sign and resisted hip abduction or internal rotation, and also the existence of calcifications or significant osteoarthritis changes on X-ray examination.

Results Acute or chronic signs of gluteus medius tendinitis were found in 22 patients (61%), and inflammatory changes suggesting both trochanteric bursitis and gluteus medius pathology were detected in 12 (33%); isolated trochanteric bursitis was found in only 2 cases (6%). Disease duration was longer in patients with inflammatory changes at both locations (14 mo vs 6 mo, $p = 0.018$), but there were no differences relating age. No significant clinical features allowed differentiation of the ultrasound findings, although a tendency towards pain location defining the underlying pathology could be observed ($p = 0.062$ for trochanteric pain, $p = 0.09$ for buttock pain). Patients showing inflammatory changes in both gluteus and trochanteric bursa on ultrasound tended to be more obese than those without bursitis ($p = 0.073$) and calcifications on X-ray tended to be found more frequently in those with only gluteus medius tendonitis ($p = 0.082$).

Conclusion Isolated trochanteric bursitis was rarely found on ultrasound examination in patients with greater trochanteric pain syndrome, but gluteus medius tendon inflammatory changes could be found in the vast majority of cases, most of them without associated trochanteric bursitis. No reliable clinical features could be used to distinguish between ultrasound changes.

OP0130 UNIQUE ULTRASONOGRAPHIC FINDINGS IN PATIENTS WITH THE HEREDITARY INCLUSION BODY MYOPATHY

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Background Hereditary Inclusion Body Myopathy (HIBM) is an autosomal recessive disorder characterised histologically by the presence of beta amyloid fibrils in myofibers and clinically by muscle weakness and atrophy with quadriceps sparing. This disorder is seen in different ethnic groups including members of Iranian Jewish families where it has been mapped to chromosome 9p1-q1. The onset is usually in the 2nd to 3rd decade of life, with slow progression leading to severe involvement of multiple muscle groups, ultimately resulting in immobilisation.

Objectives To demonstrate the facility of the use of grey scale and power Doppler sonography as a non-invasive diagnostic procedure in the evaluation of HIBM.

Methods We studied 4 Iranian Jewish patients diagnosed with HIBM. Ultrasonographic examinations of the quadriceps femoris and hamstring muscle groups were carried out in these patients. Echogenicity, as determined by grey scale assessment, was used to detect disordered muscle structure and atrophy, and power Doppler sonography was used to assess vascularity.

Results The initial symptom in all was "footdrop" due to anterior tibial muscle weakness. Two patients with disease duration of seven years developed pelvic girdle and shoulder girdle weakness. Two patients with twenty-eight years of disease were restricted to wheelchairs with severe myopathy of the upper and lower extremities. All had significant family histories consistent with HIBM. An unusual and unique pattern of central atrophy of muscle with peripheral sparing was observed in all four