Poster

Webinar on

Orthopedics, Osteoporosis, Rheumatology & Trauma Care

March 15, 2022 | Webinar

Radiologic evaluation and clinical effect of calcification in medial epicondylitis

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Background: Although most radiologic findings of medial epicondylitis (ME) are normal, up to 25% show calcification, and little is known about the clinical relevance of soft tissue calcification in ME. The purpose of this study was to reveal the characteristics of calcification in ME, and to identify their clinical relevance.

Methods: This study included 187 patients (222 elbows) who were diagnosed with ME. We classified calcification according to its anatomic location, and further evaluated its distribution. Logistic regression analysis was performed to calculate the odds ratios and 95% confidence intervals for possible factors that may affect calcification in ME: age, sex, laterality, hand dominance, visual analog scale (VAS) pain score, Mayo elbow performance score, symptom duration, history of steroid injection, number of steroid injections, concomitant ulnar neuropathy, and treatment method in terms of conservative treatment or surgery.

Results: In a total of 222 elbows, 53% (118 of 222 elbows) showed calcification in radiologic findings. The VAS pain score, number of steroid injections, and concomitant ulnar neuropathy were significantly associated with calcification in ME. Calcification was most commonly identified at the anatomical insertion site of the common flexor tendon (33%), followed by the pronator teres (18%), and the medial collateral ligament (10%). Of the total cases of calcification, 45% were distributed at multiple sites, and age was strongly associated with multiple distributions.

Conclusions: Calcification in ME was more commonly identified than previously reported and was distributed over a relatively broad area. Calcification was associated with a higher VAS pain score, history of steroid injection, and combined ulnar neuropathy. The anatomical insertion site of the common flexor tendon most commonly showed calcification, and age was a strong indicator of a broad distribution of calcification.

Biography

Hee Dong Lee is currently working in the department of Orthopaedic Surgery at Veterans Health Service Medical Center, Gangdong-gu, Republic of Korea. His research interests include Surgery, Orthopaedic Surgery, and Osteoporosis.

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Bioinformatics analysis of differentially expressed genes in primary osteoporosis

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Statement of the Problem: Osteoporosis is a multi-gene related disease; the purpose of this study was to investigate the differentially expressed genes (DEGs) related to the occurrence and development of osteoporosis (OP) as well as screen out potential drug targets.

Methodology & Theoretical Orientation: The microarray data concerns osteoporosis were obtained from GEO database and DEGs were identified by R statistical software. GO and KEGG enrichment analysis, protein-protein interaction (PPI) network analysis, and selection of hub genes were conducted.

Findings: A total of 569 DEGs were screened out, 7 up-regulated and 562 down-regulated. At the same time, GO analysis of DEGs was mainly enriched in processes such as pre-mRNA intronic binding, nuclear body, histone modification and mRNA 3'-end processing, while KEGG analysis mainly involved the ubiquitin mediated proteolysis signal pathway hsa04120. By the calculation of the STRING database, we obtained the PPI network, which is consist of 517 nodes and 363 edges, and the top 10 hub genes (TCEB1, CUL2, KBTBD6, KBTBD7, ASB8, KLHL42, ASB5, FBXO11, ANAPC10, CDC23) of this study were acquired by Cytoscape software.

Conclusion & Significance: The top 10 hub genes might help us understand the pathophysiology of OP, even provide therapeutic targets for the development of drugs. Meanwhile, it might provide some new ideas for funding creative scientific hypotheses of OP.

Biography

Liu has his expertise in the research on the mechanism of osteoporosis, as well as the prevention and treatment of osteoporotic fractures. Especially the role of iron metabolism in the occurrence and development of osteoporosis.

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Accepted Abstracts

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Mortality following post-operative periprosthetic fracture of the femur after hip replacement in the last decade: Meta-analysis of 35 cohort studies including 4841 patients
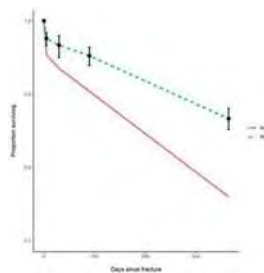
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Introduction: Post-operative periprosthetic fracture of the femur (POPFF) is a growing problem associated with increased mortality. Most registry derived estimates of mortality only record patients who undergo revision and cohort studies are generally limited to a single center, which makes comparison for the purposes of service improvement difficult. The aim of this study is to perform a systematic review and meta-analysis of cohort studies reporting mortality following POPFF in the last decade.

Materials and Methods: Study methodology was peer-reviewed (PROSPERO: CRD42020170819). Literature search was conducted using Medline and EMBASE. Primary exposure was the diagnosis of POPFF, and the primary outcome measure was all-cause mortality: whilst an inpatient, within 30-days, within 90-days and within one year of POPFF. Proportion of patients dying (95% CI [confidence interval]) was estimated using metaregression. Results were compared to mortality following neck of femur fracture (NOF) from international NOF registry data.

Results: 4841 patients from 35 cohort studies were included. Study quality was generally low with a majority limited to a single centre. Weighted mean follow-up was 2.3 years and the most common POPFF was UCS B. Pooled proportion dying as an inpatient was 2.4% (95% CI 1.6% to 3.4%). Pooled proportion dying within 30 days was 3.3% (95% CI 2.0% to 5.0%). Pooled proportion dying within 90 days was 4.8% (95% CI 3.6% to 6.1%). Pooled proportion dying within one year was 13.4% (95% CI 11.9% to 14.8%). Mortality following POPFF was similar to that of NOF up to 30 days, but better at one year.

Conclusion: 3.3% of patients die following POPFF within 30 days of injury. Mortality is similar to that experienced by patients following NOF up to 30 days, but better at one year, which may represent the lower underlying risk of death in the POPFF cohort. These results may form the basis for evaluation of services treating POPFF in the future.

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Isolated primary bone tumours of the lesser trochanter: Demographics, diagnosis and management

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Primary bone tumours of the lesser trochanter (LT) are rare and the literature describing them is sparse. In this paper, we describe the largest series of LT tumours describing the demographics, diagnosis and management.

Methods: A retrospective search of prospectively maintained radiology and oncology databases was performed to identify bone tumours of the LT diagnosed between 2007 and 2018. Metastatic lesions were excluded. All cases were re-reviewed by a senior Consultant Radiologist and all case of benign isolated tumours of the LT were included.

Results: 23 cases of isolated LT tumours were identified. There were 15 males and 8 females. Median age of our cohort was 32 (14 - 63) years. Most (n=19, 82.6%) cases had classic radiological (Radiographic, MR Imaging and CT) features and therefore did not undergo biopsy. 4 patients had equivocal radiological investigations that required biopsy to confirm the diagnosis. MR imaging was the most commonly used imaging modality for diagnosis (n=17, 73.9%).

There was a broad range of tumour subtypes, and osteochondroma (n=17, 73.9%) the most frequently diagnosed. Surgical excision was performed in 4 patients (all osteochondromas) and 4 patients underwent therapeutic radiological guided hip injections for symptomatic relief. The remaining cases were managed conservatively. Where they were identified incidentally, no intervention was required.

Conclusion: We report the largest case series of isolated primary bone tumours of the LT. All isolated primary bone tumours of LT are benign. Osteochondroma is the most common. The diagnosis can be made with on radiological investigations in most patients.

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Steroid Vs My special preparation for Osteoarthritis/PFPS

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Introduction: In osteoarthritis most surgeons prefer steroid namely triamcinolone or methyl prednisolone for Intra-Articular injection, but its efficacy is very limited, source can be proved from various article review. But I prefer my special preparation which consists of combination of triamcinolone hexacetonide or hydrocortisone or methyl prednisolone plus vit. B1 plus vit. B12 plus lidocaine plus normal saline. In my clinical practice as Orthopaedic Surgeon I have given IA for 15 cases of OA. Their follow-up was made at 2 weeks, then at 1 month for three consecutive months, then at 6 months, then finally at 2 months. After one single shot of my special preparation patient was pain free for over 1 year in which 15 days physiotherapy course was included in 1st 2 weeks after IA. All 15 cases were known cases of DM-2 with HTN and age between 49 to79.

Discussion: Since all patients had comorbid conditions and already under lots of drugs for DM and HTN, so my special preparation for OA, does not include any oral meds just single shot of my preparation. This puts patients in favourable state and puts patients in no risk or harm from long term analgesic use.

Conclusion: My special preparation single shot is superior and cost effective in comparison to other steroid repetitive use. It uses help avoid long term analgesic use and its complications in patients with DM and HTN as their renal function and Heart function are always at risk.

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Clinical features of lupus enteritis: A single-center retrospective study

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Background: Lupus enteritis (LEn) is a rare complication of systemic lupus erythematosus (SLE). Timely diagnosis and treatment of LEn are necessary to prevent the most serious consequences — intestinal perforation, gastrointestinal bleeding, and death. We compared the clinical features of SLE patients with and without LEn.

Methods: The clinical data of LEn inpatients at Suining Central Hospital from July 2012 to June 2020 were examined. These LEn patients were matched (1:2 ratio) with concurrently hospitalized SLE patients who did not have LEn. The two groups were compared using multivariate logistic regression.

Results: We compared SLE inpatients with LEn (n=43) and SLE inpatients without LEn (n=86) at our institution. Multivariate logistic regression showed that ascites (odds ratio [OR]: 9.961, 95%CI: 2.215–44.802, P=0.003), hydronephrosis (OR: 28.060, 95%CI: 2.303–341.962, P=0.009), leukopenia (OR: 5.890, 95%CI: 1.813–19.135, P=0.003), reduced complement C3 level (OR: 4.791, 95%CI: 1.605–14.300, P=0.005), and elevated immunoglobin (Ig)A level (OR: 4.040, 95%CI: 1.307–12.487, P=0.015) were independently associated with LEn. Within the LEn group, abdominal pain was the most common abdominal symptom (88.4%), and increased mesenteric fat attenuation (74.4%) and bowel wall thickening (58.1%) were the most common computed tomography (CT) findings. Most LEn patients (88.4%) required high-dose glucocorticoid therapy (≥80 mg methylprednisolone/day), and cyclophosphamide was the most commonly used immunosuppressant (62.8%).

Conclusions: Abdominal pain was the most common clinical symptom of LEn. Abdominal CT provides important information for detection and diagnosis of LEn. Ascites, hydronephrosis, leukopenia, hypocomplementemia (C3), and increased IgA were independently associated with LEn.

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Stubborn Gout

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This is a report of an interesting case of gout in a 51-year-old man. He was diagnosed 10 years ago, however, does not present with any chronic damage to joints or organs such as kidneys despite severe exacerbations. He has no family history, and the X-ray is unremarkable, despite his noncompliance with therapy. This has led to frequent painful acute attacks. It could be hypothesised, that the acute flares would not have occurred if the patient adhered to the treatment. The presentation, diagnosis and treatment of this patient are discussed in detail. Gout is characterised by the composition of monosodium urate crystals, formed by high levels of uric acid. These crystals present as erythematous, painful asymmetrical swellings on physical examination. A thorough anamnesis is required since many risk factors predispose an individual to develop this condition. If a warm, erythematous, and swollen joint is present asymmetrically, septic arthritis must be a differential.

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Pulmonary vasculitis in Hughes Stovin syndrome: Current status and future perspectives

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Hughes-Stovin syndrome (HSS) is a severe systemic vasculitis characterized by widespread venous/arterial thrombosis and pulmonary artery aneurysms (PAAs). All fatalities reported in the HSS were the result of unpredictability fatal suffocating hemoptysis. As a result, pulmonary complications must be identified at an early stage of the disease.

The HSS International Study Group reference atlas categorizes pulmonary vasculitis in HSS into six stages and defines the various radiological patterns of pulmonary vasculitis, most notably pulmonary artery aneurysms detected by computed tomography pulmonary angiography (CTPA). HSS International Study Group reference atlas describes the CTPA images that best define the broad range of pulmonary vasculitis seen in HSS. Pulmonary aneurysms were classified into six radiographic patterns: true stable PAA with adherent in-situ thrombosis, unstable leaking PAA, BAA, and/or PAP with loss of aneurysmal wall definition (most prone to rupture), CTPA images demonstrating right ventricular strain and intracardiac thrombosis.

The classification's main goal is to provide physicians with information about this rare syndrome. Since Hughes and Stovin first description of the syndrome in 1959, no such scheme has been proposed. This classification will serve as the foundation for future recommendations on the diagnosis and treatment of this syndrome.

The presentation will go over the most important CTPA findings that can occur in HSS-related pulmonary vasculitis and included very illustrative CTPA images of various pulmonary aneurysmal lesions.

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