

# Webinar on Osteoporosis, Arthritis and Musculoskeletal Disorders

June 15, 2022 | Webinar

# Poster





# OSTEOPOROSIS, ARTHRITIS AND MUSCULOSKELETAL DISORDERS

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#### Evaluation of the local scaphoid fracture pathway

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Aims: Identify clinical examination findings, initial imaging findings and stabilisation method in the emergency department for suspected scaphoid fractures.

Review the follow-up, repeat imaging and further investigations for these patients.

Identify the waiting time for further investigations / imaging.

**Introduction:** Scaphoid fractures are the most common carpal fracture and account for 2% to 7% of all fractures1. These fractures are commonly missed through clinical and radiographic examination; it has been reported that up to 40% of scaphoid fractures are missed on initial presentation.

There are three clinical findings that can indicate a potential scaphoid fracture; anatomical snuffbox tenderness (AST), scaphoid tubercule tenderness (STT) and telescoping tenderness (TT). ASB, STT and TT all have 100% sensitivity but, in one study, specificities were 9%, 30% and 48% respectively. However, when these tests are combined, multiple studies have illustrated that the specificity does increase2-3.

Current National Institute for Health and Clinical Excellence (NICE) guidance advises that MRI directly from the emergency department should be considered for suspected scaphoid fractures. Studies have shown that a minority of trauma centres currently offer further imaging from the emergency department4.

Misdiagnosis can increase patient morbidity; non-union, arthritis, deformity and instability. Early definitive diagnosis will not only prevent a missed scaphoid injury but can avert overtreatment for those without a scaphoid fracture and subjection to extended immobilization. A report by the NHSLA has highlighted the litigation cost of negligent scaphoid fracture management in the UK; 0.01% of all orthopaedic-related litigation were attributed to mismanagement of scaphoid fractures and the largest costs ascribed to a combination of failed diagnosis and delay in initiating appropriate management5.

**Methods:** This is a retrospective study of all patients identified on eTrauma (clinical platform for centralised orthopaedic trauma coordination) as referrals for a suspected scaphoid fracture from 01/04/21 - 01/08/21 at the Lister hospital. The following data was collected:

- Clinical presentation (anatomical snuffbox tenderness, scaphoid tubercle tenderness and telescoping tenderness)
- Initial plain film radiograph, method of immobilization and total time immobilised
- Follow-up and repeat plain film radiograph
- Further imaging modality and time from initial referral to further imaging.

Current local practice and pathway

Results and discussion: I. 131 patients identified in this study

II. Total number of clinical findings on physical examination: 62% had 1 finding, 28% had 2 findings, 1.5% had 3 findings and 8.5% had none





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**III**. Number of patient injuries immobilised, length of time and method of immobilisation: 115 (88%) patients had an immobilisation method. 81 in Futuro splint, 31 in thumb spina splint and 3 in scaphoid POP; more than 90% had a stabilisation method in place for at least two weeks

IV. Scaphoid fracture on initial radiograph at presentation: 6% confirmatory / high suspicion, 88% negative and 6% identified other bony injuries

V. Scaphoid fracture on repeat radiograph at two weeks: 68 patients had a repeat radiograph at two weeks; 5 (7%) confirmed a scaphoid fracture, 63 (93%) negative for scaphoid fracture

VI. Further imaging modalities and waiting time: 28 patients had further imaging requested; 16 for CT and 12 for MRI. The average waiting time from fracture clinic referral to CT and MRI were 5 weeks and 8 weeks respectively

Conclusion: 1) The most common reason for referral was from 1 clinical sign

2) 11% of patients had a scaphoid fracture identified on radiograph (on presentation AND at two weeks)

3) 21% of patients in had further imaging modalities requested (CT / MRI)

The gold standard investigation tool for identifying scaphoid fractures is MRI and, ideally, all patients with a query diagnosis of scaphoid fracture should have this imaging modality. However, the question remains; are the fracture clinic referrals appropriate with the low efficacy of reduced clinical findings?

A multi-pronged approach will be needed to decrease inappropriate referrals, increase the number of patients having further imaging and to reduce the time from presentation to CT / MRI:

1) Diagnostic algorithm education for emergency department

2) Review current pathway to incorporate MRI within 3-5 days from Presentation 6

3) Alternative dedicated imaging (cone-beam computed tomography)7

Further research is needed to fully investigate the facilitators and barriers to the implementation of NICE guidance

#### **Biography**

Abdirahman Osman is currently working at Lister Hospital, Trauma and Orthopaedic Department, East and North Hertfordshire Trust, Stevenage, United Kingdom. His research interests include Trauma and Orthopaedic, Surgery.

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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

Ahmed Al-Wizni University of Leeds, UK

**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 1.9% 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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#### Steroid Vs My special preparation for Osteoarthritis/PFPS

#### Kiran Kumar Shah

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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

#### Long Chen

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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 ( $\geq$ 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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