MSK POSTER PRESENTATIONS

P001 Intra- and Inter-operator precision errors for single site tibia measurements using the Bindex QUS scanner

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Background: The Bindex is a quantitative ultrasound scanner, which measures the cortical thickness of bone in the radius and tibia as a measure of fragility fracture risk and osteoporosis (1). This study aimed to explore the intra- and inter-operator precision errors for the single site measurement protocol at the proximal tibia.

Method: Four operators had half a day training on the Bindex. 30 participants were recruited and scanned with duplicate scans by two operators each; each pair scanned 15 participants. The root mean squared standard deviation (RMSSD) and coefficient of variation (RMSCV%) were calculated to assess the intra- and inter-operator precision errors.

Results: Intra-operator precision errors ranged from 1.33% (0.014) to 1.59% (0.016) for RMSCV% (RMSSD) and inter-operator prevision errors were 1.97% (0.020) and 2.45% (0.025) for RMSCV% (RMSSD) for pair 1 and pair 2 respectively. The grouped inter-operator precision error was RMSCV% 2.23% (RMSSD 0.022). The mean age of the population scanned was 21 years, with a mean body mass index of 24kg/m2.

Conclusion: The intra-operator precision errors are comparable with those reported for DXA(2). Inter-operator precision errors were greater than the intra-operator ones, which is in line with expectations for a device utilising a hand-held probe. Operators can be rapidly trained to use the Bindex and perform scans with good precision. The differences between operators may be reduced with further training. This study was performed on young volunteers, so the results may not reflect a standard clinical population.

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P002 Necessity of cervical spine MRI imaging in spondyloarthropathy imaging protocol

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Background: For the assessment of sponyloarthropathy (SPA), MRI whole spine (WS) and sacroilliac joints (SIJs) is the gold standard, it is readily available with no radiation burden making it an invaluable investigation tool and allowing prompt treatment of inflammatory back pain. SPA has a propensity for the thoracic spine and SIJs, and MRI can detect active/chronic changes. At our institution, the SPA MRI protocol includes the WS and SIJs, taking a minimum of 45 minutes. The authors aim to streamline the current protocol to improve efficiency and patient throughput. Methods: Retrospective analysis of MRI WS and SIJs performed between July 2021- January 2023 indicated for SPA, referred by Rheumatologists. Inflammatory lesions (vetebral corner/ endplate osteitis, costovertebral/costotransverse/ facet joint odema) and structural changes (erosions, syndesmophytes, ankyloses) were deemed positive cases. The authors documented the level of abnormality (cervical/thoracic/lumbar/SIJs) and the type of SPA change.

Results: 368 patients reviewed; 49 patients were SPA positive. 86% patients positive in the thoracic spine; 45% exclusively. 16% involved the cervical spine, 0% exclusively.

Conclusion: MRI is the gold standard for investigating SPA and can detect inflammatory lesions/ structural changes. Majority of cases were positive in the thoracic spine; with no exclusive cervical spine changes. Omitting the cervical spine from the SPA protocol can reduce scanning/ reporting times and increase patient throughput.

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al. (2019) "Eular recommendations for the management of Sjögren's syndrome with topical and systemic therapies," Annals of the Rheumatic Diseases, 79(1), pp. 3–18. Available at: https://doi.org/10.1136/annrheumdis-2019-216114. Weber, U. et al. (2014) "Does spinal MRI add incremental diagnostic value to MRI of the sacroiliac joints alone in patients with non-radiographic axial spondyloarthritis?," Annals of the Rheumatic Diseases, 74(6), pp. 985–992. Available at: https://doi.org/10.1136/annrheumdis-2013-203887.

P003 Appropriateness of referrals for MRI knees and MRI lumbar spines from general practice - a quality improvement project

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Background: Back pain is the most common site of musculoskeletal complaint, with knee pain being 2nd [1]. Current guidelines regarding knee and back pain state that there are no indications for GPs to refer for imaging. Instead, GPs are advised to refer patients to either an MSK clinic (e.g. physiotherapy) or fracture clinic. The number of patients waiting for more than 6 weeks for an MRI scan increased from 25.8% in 2021 to 29% in 2022 [2]. This highlights the importance of informing clinicians about the indications for MRI knees and MRI lumbar spines to help reduce waiting times.

Method: Patient records were retrieved from EMIS Web using parameters such as "Radiology", and "Magnetic Resonance Imaging", with ages filtered to 18+. A randomised selection of 410 patient records were searched. The type of MRI scan, the findings of the scan, as well as the consequent management plan were recorded.

Results: 37 out of 410 patients were deemed appropriate for final analysis. 19 patients had inappropriate MRI knee scans, whilst 18 had MRI lumbar spine scans. There were more positive findings from the MRI lumbar spines (66%) compared to the MRI knees (52%). Most patients were treated with a combination of analgesic medication and physiotherapy in both the MRI knee and lumbar spine groups (69% and 56%, respectively).

Conclusion: Results suggest that it is better for GPs to refer patients to an MSK service than order imaging for back and knee pain, since most patients ended up being treated by physiotherapy.

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2. NHS Diagnostic Waiting Times and Activity Data. 2022; Available from: https://www.england.nhs.uk/statistics/wp-content/uploads/sites/2/2022/03/DWTA-Report-January-2022_C4LM7K.pdf.

P004 Lateral epicondylitis - review of sonographic appearances and image guided therapeutic regimens

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Background: Lateral epicondylitis ("tennis elbow") is estimated to affect between 1-3% of the adult population. Tendinosis of the extensor origin at the lateral humeral epicondyle is the underlying pathological process. Ultrasound can assist in diagnosis. If first line non-invasive measures fail there are several image guided therapeutic regimens that are used in current clinical practice. These include dry needling, corticosteroid injection, platelet rich plasma injection, prolotherapy and injection of autologous blood.

Purpose: Diagnostic- Ultrasound assessment can identify structural changes in the involved tendons ; thickening, hypoechogenicity, intra tendon calcification and bony irregularity at the tendon insertion. Colour doppler may show tendon hyperaemia. The absence of these findings have been shown to rule out lateral epicondylitis. Ultrasound can also be used to assess for entrapment of the posterior interosseus nerve, which may present with similar clinical features.
Therapeutic - Unfortunately there is still no universally accepted image guided therapeutic option. The National Institute for Health and Care Excellence (NICE) does not recommend image guided therapy for long term symptom relief. The safety, mechanism of action, availability and efficacy of these four therapeutic strategies must be considered when providing this service in routine clinical care.

Summary: We will discuss and display the sonographic findings of lateral epicondylitis. In addition we will outline the current evidence, hypothesised mechanisms of action and recommended techniques of the aforementioned image guided therapeutic regimens. This information can assist both the referring and operating clinicians in their clinical practice.

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P005 GP mri knee results - a burden on orthopaedic clinics?

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The guidelines in the community directing primary care practitioners on who qualifies for a knee MRI are dated and difficult to access. Before updating these guidelines, we must ascertain if primary care practitioners are currently actioning on their MRI reports efficiently. Data had been prospectively collected by a MRI Knee reporting radiographer within a Scottish Health Board. Upon review, scans were excluded that had recommended an Orthopaedic referral in the report. The remaining number were reviewed to ascertain if these patients were still referred to and seen by Orthopaedics and their end outcome using clinical portal. In a two-year period over 500 knee MRI scans were requested and reported back to primary care. Of 260 scans/ reports that did not stipulate need for an Orthopaedic review, 70 patients were referred to Orthopaedics (26.92%). Of these 17 (6.53%) patients are still on the waiting list. Five (1.92%) patients underwent operative intervention and 31 (11.92%) were sent to physio and discharged, the remaining 17 (6.54%) patients had varied interventions/onward referrals. Primary care physicians appear to be actioning on most scan reports in the community, with roughly 10% of patients being referred to Orthopaedics requiring no further intervention. Along with the radiology department and management, we are revising the guidelines for G.Ps to access MRI for knee pain.

https://pubmed.ncbi.nlm.nih.gov/30637879/ https://pubmed.ncbi.nlm.nih.gov/32171376/

P007 Don't be a clot! Additional pathologies at DVT scanning

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Background: A DVT is characterised by pain and swelling in a limb. Duplex venography is performed to diagnose venous thrombosis. However, there are other pathologies that can mimic the same symptoms. In addition there are incidental findings that can be seen. At our busy DGH our pick up rate for DVT is 15-20% of referrals. We assess the whole leg including the calf. We have found a number of additional findings in our practice.

Purpose: This pictorial review will enable sonographers to appreciate any additional pathology they may encounter during scanning the leg for DVT. It is important to be aware that patients with suspected DVT may have other abnormalities. Sonographer teaching should include knee MSK findings.

Summary of content: The additional findings will be illustrated with ultrasound images, plain films, CT and MRI. These include; Bakers cyst, Ruptured Bakers cyst, oedema, superficial thrombophlebitis, gastrocnemius myositis, knee joint effusion, meniscal cyst, Achilles tendon rupture, osteochondroma, arterial occlusion and aneurysm and intramuscular haematoma.

P008 Knee radiographs in ED: Reporting essentials

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Background: Plain films of the knee are the mainstay of investigation for the painful knee in the Emergency Department. In general interpretation is straightforward. However, there are a number of subtle injuries that can be difficult to identify and it is easy to miss fractures in certain cases. Small bony fragments can be a clue to significant injury.

Purpose: Based partly on our weekly ED/Radiology meetings and teaching files we have assembled relevant images of the knee obtained in the ED department. It is important that reporting radiographers, Radiologists and ED doctors are able to understand subtle injury and to look out for unsuspected pathology.

Content: A number of cases are presented focussing upon subtle injury including small bony fragments such as the Second, sliver and sleeve fractures. In addition soft tissue changes around the knee such as quadriceps rupture and patella tendon injury are highlighted. Unsuspected pathology such as tumour is also included.

P009 The "bum & cherry" technique -- a quicker way of correcting lateral knee positioning

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Background: Correcting lateral knee positioning is predominantly based on fibula head position, which can be unreliable. Some radiographers are unsure whether internal or external rotation is needed to superimpose femoral condyles. The "bum & cherry" technique offers a strong and quick visual indicator to identify whether positioning is too internally or externally rotated and which way to turn to correct positioning within 3 seconds of taking the x-ray.

Purpose:
* To understand the key difference between medial and lateral femoral condyles
* To visualise the appearance of lateral knee x-rays that are too externally and internally rotated
* To identify which of these presents as a "bum" and which are a "cherry"
* To use the "bum" and "cherry" to correct lateral knee positioning within seconds

Summary of content: There is a video on the technique and supplementary posters; these contain an educational narrative that will take participants through the key driver of the technique: the anatomical and visual differences between lateral knee x-rays that are too internally and too externally rotated. Participants will then be shown the simple visual indicator that identifies x-rays that are too internally rotated ("cherries") and x-rays that are too externally rotated ("bums"). Participants will then be demonstrated that "bums" need turning in and "cherries" need turning out eliminating guesswork regarding correcting positioning.

Video: https://www.youtube.com/watch?v=GaRnsps6u4E Posters: https://imgur.com/a/h9Aio4B
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P010 Long-term precision errors of radiofrequency echographic multi-spectrometry (REMS) bone density measurements using an Echolight scanner at the lumbar spine and femoral neck

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Background and study aim: Osteoporosis is a chronic skeletal disease characterized by low bone density and microarchitectural deterioration of the bone structure, leading to enhanced bone fragility and increased susceptibility to fractures, particularly of the hip and spine[2]. The standard imaging technique for evaluating bone mineral density is through Dual X-ray Absorptiometry (DXA) scanning. However, DXA has some limitations that prompt the exploration of alternative approaches. Radiofrequency Echographic Multi-spectrometry (REMS) is an innovative diagnostic technology that provides a means of assessing bone density through BMD measurement[1]. This study aims to evaluate the precision errors of REMS measurements at the lumbar spine and femoral neck over the long term.

Methods: 10 participants in both genders underwent 12 scans of their lumbar spine and neck of femur, over three years using the Echolight scanner. Pregnancy and prior hip replacement or spine surgery were both exclusionary conditions. The REMS root mean square coefficient of variation (RMSCV%), and root mean square standard deviation (RMS-SD) were calculated

Results: The RMS-SD, which represents the precision error rate, was 0.012g/cm² for the Lumbar spine, 0.008g/cm² for the femoral neck, and 0.01g/cm² for the total proximal femur. The RMSCV% was 0.97%, 0.89%, and 1.12% for the lumbar spine, femoral neck, and proximal femur respectively.

Conclusion: The outcomes show that the precision error (PE) rates for REMS measurements on the spine and femur are comparable to the reported PE for DXA. However, further investigation is required to determine the impact of obesity on REMS measurements, as it was previously studied in the context of DXA by Knapp et al. (2012).

P012 MSK arthropathy - 'pieces of the puzzle don't always fit'- simple pictorial how to guide

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Interpretation of arthropathy requires in depth knowledge and experience to ensure quality actionable reports are verified with resultant optimal patient outcome being achieved. 'Initial imaging evaluation of arthritis begins with radiography' (Kluckman, 2021).

Even with extensive experience in the field of medical image interpretation it is a known fact that arthritidies present relatively unique scenarios in the fact that inter reporter and intra reporter differences regularly occur and are more prevalent when compared to other areas of radiographic image interpretation.

Without a systematic thorough approach using both radiographic imaging and clinically presenting factors conclusive actionable outcomes cannot be achieved to positively impact patient treatment, care and overall outcome.

A simple pictorial poster in the form of a flow diagram/puzzle using both words and radiographic images can provide an everyday reference guide to both inexperienced and experienced reporters alike. The aim of this poster is to do exactly that. A valuable resource to positively impact patient care.

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P013 Nora lesion: The eponymous bizarre parosteal osteochondromatous proliferation- MR imaging with pathologic correlation

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Background: "Bizarre parosteal osteochondromatous proliferation" (BPOP) or Nora lesion represents an unusual proliferative condition occurring in the tubular bones of the hands and feet. In BPOP, abnormal cartilage harbours characteristic bizarre binucleate chondrocytes. Whether related to periosteal injury or a true neoplastic process, BPOP may occasionally exhibit a locally aggressive behaviour simulating bone sarcoma.

Purpose: We present two patients with BPOP to address this distinct osteochondromatous abnormality. Radiographs revealed an osteosclerotic lesion arising from the phalanges. CT findings disclosed a parosteal, corticated hypodense mass that originated directly from the phalangeal cortex, sparing the cancellous bone. Ultrasonography demonstrated lesions of increased echogenicity surrounded by a hyperechoic rim, with retro-acoustic shadowing. In one patient, dynamic flexion-extension images proved that the mass jeopardized the flexor tendons. MR images showed an ovoid lesion of decreased signal intensity on T1-weighted images. On the T2-weighted images, lesions exhibited either decreased or increased signal intensity. In one patient, the lesion exerted mass effect on the neurovascular bundle, causing motosensory disturbance. Surgical excision was performed and histopathology disclosed BPOP.

Summary of content: BPOP may demonstrate imaging appearances that range from osteochondroma to bone sarcoma. BPOP is characterized by corticomedullary continuity with parent bone and an overlying cartilage cap, whereas osteochondroma typically is noncontiguous with underlying bone and lacks a hyaline cartilage cap. Bone sarcomas only rarely affect the small bones of the hands and feet and are characterized by predominant corticomedullary bone destruction. The imaging appearances of parosteal lesions exhibiting characteristics of BPOP may help radiologists exclude malignancy.

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P014 Juxtacortical cartilaginous tumours in the hand and foot: Imaging and pathology features

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Background: Juxtacortical (parosteal) chondroma (JC) is a benign cartilaginous tumor arising from the periosteum. JCs comprise 0.6-1.3% of all cartilage tumors and are located in the hands and feet of young patients. On histology, JC features a hyaline cartilage mass juxtaposed to the bone cortex. Soft tissue chondroma is histologically identical to JC, and imaging differential diagnosis of these two cartilaginous lesions relies on osseous involvement. Both tumors need to be differentiated from malignant low-grade juxtacortical chondrosarcoma and the periosteal osteosarcoma.

Purpose: We describe the imaging and histopathological findings in 4 patients (3-female, 1-male, 35-76 years-old) with JCs of the hand and foot who presented with swollen digits. Radiographs showed small, juxtacortical calcified mass lesions. CT images documented dense osseous formations about the phalangeal cortex. Ultrasonography showed hypoechoic mass lesions containing calcifications. On MRI, the lesions had intermediate signal intensity on T1- and increased signal intensity on T2-weighted images. A few intralesional regions of low signal intensity were seen, representing calcified matrix. The lesions were of predominant high signal intensity on the 3D gradient-echo sequences used for depiction of cartilage, and showed ample contrast enhancement. Patients underwent surgical excision, and histologic examination of the lobulated lesions yielded juxtacortical hyaline cartilage exhibiting varied cellularity, without nuclear anaplasia.

Summary of Content: Benign juxtacortical cartilaginous tumors are usually small-sized lesions, causing periosteal elevation with an intact to thickened cortex. Typically marginated by a cuff of sclerosis, parosteal chondromas show no intramedullary involvement. When present, cytologic anaplasia, osteosarcomatous foci, or chondrosarcomatous tissue favour malignancy.

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P015 Mucopolysaccharidosis type-IV (Morquio-Brailsford syndrome): Assessment of skeletal deformity and bone mass status

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Background: Mucopolysaccharidosis type-IV (MPS-IV) or Morquio-Brailsford syndrome is a rare metabolic disease caused by deficiency of the enzymes catalyzing degradation of the glycosaminoglycans (GAGs). Storage of GAGs (mucopolysaccharides) in turn, causes multisystemic organ damage including bone and cartilage abnormalities comprising "dysostosis multiplex". Osteoporosis, dwarfism, kyphoscoliosis, lumbar lordosis, and platyspondyly are common. Additional manifestations may include coxa valga with dysplastic, flattened femoral heads and rapid evolution to osteoarthritis.

Purpose: We present the bone densitometric results in a 35-year-old female with MPS IV and kyphoscoliosis. Bone mineral density (BMD) was measured at the lumbar spine (LS) using DXA and 3-D QCT. BMD was also measured at the proximal femur (total hip, femoral neck, trochanter, intertrochanter) using DXA. BMD of the LS by DXA appeared falsely normal, 1.373 g/cm2 (T-score: 3) due to prominent degenerative changes and spinal deformity. BMD of the foreshortened femoral neck showed borderline osteopenia, 0.727 g/cm2 (T-score: -1.1). BMD appeared fallaciously normal (T-scores were 0.3, -0.1, and 0) for the trochanter, intertrochanter, and total hip sites, respectively. When spinal trabecular BMD was estimated using 3D-QCT the volumetric BMD was 70.4 mg/cm3 (< 80 mg/cm3) (T-score: -3.77, Z-score: -1.47), indicating osteoporosis.

Summary of content: In MPS-IV, severe skeletal deformity may jeopardize bone mass measurements by DXA, which is a projectional 2D-technique allowing the assessment of combined trabecular and cortical bone BMD. Because QCT enables separate estimates of trabecular and cortical BMD providing volumetric mineral density, it is well suited for the determination of true bone mass in these patients.

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P016 The uncommon Os sustentaculum: An accessory foot ossicle associated with painful talocalcaneal coalition

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Background: The os sustentaculum (OS) is a small accessory bone lodged at the medial aspect of the sustentaculum tali. OS occurs with an incidence of 0.3%, and may become symptomatic. In talocalcaneal coalition (TCC), (fibro)-osseous union between the talus-calcaneus causes painful restriction of motion of the subtalar joint. OS may form accessory joints with both the talus and calcaneus that can fuse, developing a talocalcaneal bridge. We believe there is a meaningful association between OS and the development of TCC.

Purpose: We describe a patient with medial ankle pain related to an OS and TCC. Radiography showed an OS, and suggested TCC. CT revealed extraarticular TCC with OS on the left foot, and TCC without OS on the right foot. Obliteration of irregular talocalcaneal joint, subchondral sclerosis, and dysmorphic sustentacula were seen. On MRI, a distinct ossicle was visualized interposed between the calcaneus and talus, forming two separate junctions (one with the sustentaculum tali and another with the talus). STIR images showed marrow oedema in the OS and the osseous coalition. Unlike the symptomatic ankle harbouring OS, there were no oedematous changes on the foot TCC without OS. Therefore, we presume that there is an association between marrow oedema and medial ankle pain, in patients with a TCC harbouring an OS. After surgical resection of the painful TCC coalition with OS the symptoms resolved.

Summary of content: Because OS can become a source of medial ankle pain in patients with tarsal coalition, recognition of this association is clinically important.

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P017 Dish, dash... dosh?

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Background: Diffuse idiopathic skeletal hyperostosis (DISH) and axial spondyloarthritis (AxSpA) are traditionally regarded as mutually exclusive conditions with separate classification and diagnostic criteria. Inflammatory back pain is increasingly recognised to be poorly sensitive and specific for AxSpA (1). We present imaging from a classical case of each DISH and AxSpA and two separate cases with imaging findings consistent with both DISH and AS.

Purpose: We propose that current dichotomous classification and diagnostic criteria fail to recognise the possibility of co-existent DISH and AxSpA changes that can affect a proportion of patients. This can lead to a diagnostic dilemma which may result in some patients being denied effective treatment and others receiving inappropriate immunosuppression.

Summary of content: Possibility of the co-existence of features of both AxSpA and DISH must be considered when reporting imaging. Whether this represents true 'dual pathology' or overlap of imaging findings can be uncertain from case to case (2). Specific imaging reports on the presence of both AxSpA and DISH features can enable clinicians to interpret the radiological findings within the clinical context. Further research into the prevalence and outcomes of patients with features of both entities is warranted to guide future practice.

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P018 Secondary bone healing process

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Bone fractures are one of the most common injuries occurring due to trauma or pathological factors. There are two types of fracture healing processes; primary healing and secondary healing. In primary healing there is a direct union of the bone aided by conventional compression plate, which facilitates the stability of the fracture site. Secondary bone healing is the most common form of bone healing process and has three stages. The first stage is the inflammatory stage and occurs within hours. Secondly, the reparative stage takes place within days to weeks. Finally, the remodelling stage lasts months to years. Diagnostic radiography can be a vital tool not only to identify a fracture, moreover it allows the Radiographer and other clinicians to be able to identify the age of fracture through the different stages of secondary bone healing when interpreting radiographs. It is important for Radiographers to be familiar with normal appearances of the stages of bone healing. Furthermore, this will essentially facilitate in identification of non-union fractures and determine whether the patient requires conventional intervention.

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P019 Soft tissue foreign body (STFB) detection utilising ultrasound and general radiography: A phantom based study employing a survey

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Background: Soft tissue foreign body (STFB) wounds commonly result from punctures or lacerations in the extremities and pose various health risks if retained (Tantray et al., 2018). Guidance indicates the initial use of general radiography for STFB detection, however, this carries a stochastic risk of radiation-associated cancer (Davis et al., 2015; Ingraham et al., 2015). Additionally, high fallibility has been observed for General radiography when imaging

radiolucent STFBs, producing false negative diagnoses (Carneiro et al., 2020). An alternative quick, inexpensive and non-ionising-radiation modality is ultrasound (Royal college of radiologists (RCR), 2022).

Methods: Seven phantoms (mimicking soft tissue of the hand) were created to house foreign bodies of varying materials and radiopacity. These were imaged in a blind study using ultrasound and direct digital radiography. To minimise researcher bias, a blind survey of radiography staff, apprentices and students at a university was employed to assess the images/videos of the phantoms for the presence of a foreign body.

Results: Respondents (n=50) achieved a mean sensitivity of 95% and a mean specificity of 90% in detecting STFBs in the ultrasound videos and a mean sensitivity of 53% and a mean specificity of 88% in the radiographs.

Conclusion: Under the conditions of the study, general radiography was highly sensitive (99%) and specific (88%) for radiopaque STFBs but had poor sensitivity (9%) for radiolucent STFBs. Whereas ultrasound was highly sensitive and specific in the detection of STFBs of varying densities, suggesting possible superior capabilities for STFB detection. Future in-vivo study is required to investigate the potential positive impact to practice.

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CARDIAC / CHEST & LUNG POSTER PRESENTATIONS

P020 Using CT scan measurements on routine surveillance CT in metastatic NET disease to improve the screening for carcinoid heart disease

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Background: Patients with metastatic neuroendocrine tumours (MNET) have surveillance CT scan, therefore non-gated cardiac imaging is acquired. We present preliminary data investigating screening of carcinoid heart disease (CHD) in MNET. We investigated simple measurements on CT thorax that maybe helpful detecting the presence of CHD.

Method: This retrospective single centre study was performed on 73 tertiary cardiology service patients with suspected CHD. All patients had CT scans before and after referral. CT scan nearest to the referral date prior to cardiology intervention was investigated. We measured simple non-gated cardiac CT parameters and assessed for differences in groups with confirmed CHD (41 patients) and non-CHD (32 patients) after cardiology investigation. Parameters include maximum axial short axis of both ventricular internal diameters and ratio (RV/LV), maximum axial long axis of both atrial internal diameters and their ratio (RA/LA). We calculated the dispersion measures and unpaired t-tests. 3 parameters were statistically significant.

Results: 75% of CHD patients and around 75% of non-CHD patients have a RA/LA larger and less than ≈1.4, respectively ($p < 0.0001$). 50% of CHD patients and 75% of non-CHD patients have a right atrial internal diameter greater and lower than approximately 58mm, respectively ($p = 0.002$). Respectively, 50% of CHD patients and 75% of non-CHD patients have a RV/LV above and below 1 ($p = 0.028$).

Conclusion: This preliminary assessment suggests that measuring cardiac CT parameters from routine CT scans maybe useful for identifying early CHD in MNET patients and can be a simple addition to routine reporting.

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