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IS THERE STILL A PLACE FOR GALLIUM 67 IN MALIGNANT OTITIS EXTERNA? LESSONS FROM A RETROSPECTIVE REVIEW AT A UK BASED TERTIARY CARE CENTRE

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ABSTRACT

Background

Malignant Otitis Externa (MOE) is a severe, potentially life-threatening infection of the external auditory canal that often requires prolonged antibiotic treatment. Accurate assessment of disease activity and response to treatment remains a clinical challenge. This study aims to evaluate the role of Gallium-67 (Ga-67) scintigraphy in guiding management decisions in patients with MOE.

Methodology

A retrospective review was conducted on 36 patients diagnosed with MOE who underwent Ga-67 scintigraphy between 2021 and 2025. Clinical notes, imaging findings, and treatment decisions were analyzed using the Trust's electronic records and imaging system (WebV and PACS).

Results

Six patients were excluded from the study due to various factors, including intolerance, palliative discharge for a concurrent malignancy, loss to follow-up or inconclusive reports. Of the remaining 30 patients, Ga-67 scintigraphy indicated active infection in 20 cases and resolved infection in 10. In the active group, intravenous antibiotics were continued for six weeks in 13 patients and discontinued in 7. In the resolved group, intravenous antibiotics were stopped in 10 patients. Overall, Ga-67 scintigraphy influenced treatment decisions in 22 of 30 patients (73%), supporting stratification into three categories: active disease requiring continued therapy, resolved infection warranting cessation, or indeterminate cases requiring clinical judgment.

Conclusion

Although Ga-67 scintigraphy is no longer routinely used in the United Kingdom (UK) due to the availability of advanced imaging modalities such as MRI and FDG PET/CT, it may retain value in select complex or refractory cases. In such scenarios, it can offer useful adjunctive information, particularly when clinical and conventional imaging findings are inconclusive.

Keywords: Gallium-67 (Ga-67), Scintigraphy, Single-Photon Emission Computed Tomography (SPECT-CT), Malignant Otitis Externa, Infection

COMPARISON OF QUALITATIVE AND QUANTITATIVE ASSESSMENT OF RADIOGRAPH FOR THE DIAGNOSIS OF LUMBAR VERTEBRAL FRACTURES IN POST MENOPAUSAL WOMEN

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ABSTRACT

Background
Osteoporosis is a major health issue affecting postmenopausal women, often leading to vertebral fractures that are underdiagnosed due to subtle symptoms. Traditional radiographic evaluation methods like the semi-quantitative Genant technique can be subjective. In contrast, the McCloskey morphometric method offers a quantitative approach based on vertebral body height measurements. However, there is a lack of localized normative data and comparative validation in the Malaysian population. This study aims to establish normal lumbar vertebral body height values in postmenopausal Malaysian women and compare the diagnostic performance of the Genant and McCloskey methods in detecting vertebral fractures.

Methodology
This retrospective cross-sectional study was conducted in two phases. Phase 1 involved 134 healthy postmenopausal women from Hospital Sultan Abdul Aziz Shah (HSAAS) to determine normative vertebral body heights (T12–L5). Phase 2 analyzed 153 postmenopausal women with osteopenia or osteoporosis from a population study database. Vertebral fractures were assessed using both Genant and McCloskey methods, and statistical comparisons were made to evaluate diagnostic accuracy and associations with sociodemographic factors.

Results
Normative data for vertebral body heights were established. The prevalence of vertebral fractures using the Genant method was 15.7%, increasing significantly with age. The McCloskey method showed 100% sensitivity and 90% specificity compared to the Genant method, detecting 10% additional fracture cases. A strong agreement between methods was observed ($\kappa = 0.79$; AUC = 0.96). Age and fracture presence were significantly associated with lower bone mineral density (BMD), while race and diabetes status were not.

Conclusion
The McCloskey method is a reliable tool for vertebral fracture detection and may complement or enhance Genant-based evaluations. The study provides the first local vertebral height reference for postmenopausal Malaysian women, supporting the development of population-specific diagnostic guidelines.

Keywords: Vertebral fracture, Genant method, McCloskey method, vertebral fracture, postmenopausal women

A GIANT LIPOMA IN THE LEFT HAND

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ABSTRACT

Lipomas are common benign soft tissue tumour typically found in areas rich in fatty tissue. Giant lipomas (> 5 cm) are rare in the hand. We report a case of a 61-year-old right-hand dominant female who presented with 17-month history of progressive left-hand painless swelling; The swelling began at palmar region of 5th metacarpophalangeal joint (MCPJ) which extended radially to thenar region, associated with tingling and numbness at radial aspect of left index finger. Her daily activities were affected. Clinical examination revealed swellings over palmar regions of 5th and 4th MCPJs as well as thenar region with reduced sensation at radial aspect of left index finger. Ultrasonography suggested a lipoma, which MRI showed well-defined, multilobulated, encapsulated subcutaneous mass occupying the palmar region of the left hand, predominantly the deep space. Excision biopsy was performed. Histopathological examination features are consistent with lipoma; No evidence of malignancy.

Keywords: Lipoma, hand, palmar, hand lipoma, benign.

TUBERCULOUS TENOSYNOVITIS OF THE WRIST: AN UNCOMMON EXTRA-PULMONARY TUBERCULOSIS MANIFESTATION

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ABSTRACT

Tenosynovitis due to tuberculosis is a rare extrapulmonary manifestation, often masquerading as benign soft tissue swelling and leading to delayed diagnosis. A 57-year-old woman presented with progressive right wrist swelling for one year, without preceding trauma. Physical examination revealed large volar and dorsal swellings with impaired wrist and finger mobility. MRI demonstrated multi-loculated cystic lesions involving the tendon sheaths, with internal rice bodies and bone erosions. Microbiological culture confirmed Mycobacterium tuberculosis infection. The final diagnosis was tuberculous tenosynovitis complicated by a compound palmar ganglion. This case highlights the importance of considering tuberculous infection in patients with persistent wrist swelling. Prompt imaging evaluation and microbiological testing are essential for timely diagnosis and management.

Keywords: Tuberculosis, Wrist tenosynovitis, Compound palmar ganglion, Rice bodies, Extra-pulmonary infection

LEIOMYOSARCOMA WITH RARE METASTATIC LOCATION; A CASE REPORT

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ABSTRACT

Leiomyosarcoma is a rare, aggressive malignant tumor arising from smooth muscle cells, typically found in the uterus, gastrointestinal tract, and vascular tissues. It may also occur in soft tissue or bone and is known for its high risk of recurrence and metastasis. This case report presents a 39-year-old female who initially presented with a progressively enlarging swelling in her right elbow. Surgical excision confirmed FNCLCC grade-3 leiomyosarcoma. Despite adjuvant radiotherapy, she later developed bilateral breast lumps. Biopsy revealed a malignant spindle cell tumor in the left breast and a benign lesion in the right. Months later, she presented with a palpable mass in the left upper arm, identified as recurrent leiomyosarcoma. PET imaging revealed metastases to the left arm and right posterior rib. Surgical removal of these lesions confirmed recurrence and metastatic disease. This case highlights the aggressive behavior of leiomyosarcoma and emphasizes the importance of vigilant, long-term follow-up.

Keywords: leiomyosarcoma, recurrence, soft tissues, imaging

MAGNETIC RESONANCE IMAGING (MRI) IN THE DIAGNOSIS OF ATYPICAL ANKLE MANIFESTATIONS OF GOUT INVOLVING THE CALCANEOFIBULAR LIGAMENT (CFL)

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ABSTRACT

Gout, the most common inflammatory arthritis in men, typically presents as monoarticular arthritis of the first metatarsophalangeal joint, with frequent involvement of the midfoot and ankle. Typical ankle involvement includes the tibiotalar and subtalar joints and the anterior talofibular ligament (ATFL), often associated with redness, swelling, and pain. In contrast, atypical involvement of structures such as the calcaneofibular ligament (CFL) and Achilles tendon is rare and usually reflects chronic tophaceous gout with soft tissue urate deposition. These uncommon presentations may mimic other conditions such as tendinopathy or bursitis, leading to diagnostic delays. Advanced imaging, particularly MRI, plays a vital role in detecting tophi, which appear as low-signal nodules on T1-weighted images with variable T2 signal and contrast enhancement. We report a case of a 47-year-old man initially misdiagnosed with retrocalcaneal bursitis, in whom MRI revealed tophaceous gout involving the CFL and medial malleolus. This case emphasizes the importance of MRI in recognizing atypical gout locations for accurate diagnosis and management.

Keywords: Calcaneofibular ligament, MRI, Ankle, Tophaceous gout, Atypical presentation.

PEDIATRIC THUMB LESION MIMICKING MALIGNANCY: A RARE CASE OF ECCRINE ANGIOMATOUS HAMARTOMA

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ABSTRACT

Eccrine angiomatous hamartoma (EAH) is a rare benign cutaneous lesion involving eccrine and vascular proliferation. It can mimic malignancy, especially with rapid growth, pigmentation, and atypical locations.

We report a 6-year-old girl with a one-month history of painful swelling and blackish discoloration of the left thumb. Ultrasound showed a small, ill-defined hypoechoic lesion. MRI revealed a flat, elevated lesion with T1/T2 hypointensity, no suppression on STIR, minimal peripheral post-contrast enhancement, restricted diffusion on DWI/ADC, and blooming on GRE. The lesion was located at the nail bed, with surrounding inflammatory changes.

Histopathology confirmed EAH.

This case highlights the importance of considering EAH in the differential diagnosis of pediatric soft tissue lesions that mimic malignancy. Early biopsy is essential for accurate diagnosis and to prevent unnecessary aggressive treatment.

Keywords: thumb lesion, rare cutaneous lesion, pediatric soft tissue tumor

INTRAMUSCULAR SCHWANNOMA OF THE DELTOID IN A TODDLER

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ABSTRACT

Schwannomas are benign peripheral nerve sheath tumour originating from Schwann cells. Intramuscular schwannoma, particularly in a paediatric patient, is extremely rare. We report the case of a 2-year-6-month-old boy who presented with one-month history of a sudden and painless left shoulder swelling. Clinical examination revealed a firm and non-mobile mass, approximating 5 x 7 cm in the left shoulder. Ultrasound and magnetic resonance imaging (MRI) scans demonstrated a well-circumscribed mass within the left deltoid muscle. Surgical excision of the mass was performed. Histopathological analysis confirmed the diagnosis of schwannoma.

Keywords: Schwannoma, intramuscular, deltoid, shoulder, magnetic resonance imaging.

AGGRESSIVE FEMORAL OSTEOSARCOMA WITH EARLY PULMONARY METASTASIS IN A 24-YEARS-OLD FEMALE: A CASE REPORT

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ABSTRACT

Osteosarcoma is the most common primary malignant bone tumor in young individuals, predominantly affecting adolescents. We report a unique case of a 24-years-old female who presented with progressive swelling and pain in the left thigh. Imaging studies revealed a destructive bone lesion in the distal femur with classic radiologic signs of osteosarcoma, including a wide transition zone, cortical destruction, and Codman triangle periosteal reaction. MRI showed an aggressive soft tissue mass invading the articular surface. Histopathology confirmed a conventional osteosarcoma. Notably, thoracic CT revealed multiple pulmonary nodules consistent with early metastasis. This case is significant due to the relatively rare occurrence in a female adult at this age, the aggressive local invasion, and the presence of distant spread at diagnosis. It highlights the importance of early detection, multimodal imaging, and comprehensive evaluation to guide optimal treatment planning and improve survival outcomes.

Keywords: Osteosarcoma, distal femur, pulmonary metastasis, female adult

INTRAMUSCULAR HEMANGIOMA OF THE FOREARM: INSIGHTS FROM A MULTIMODALITY IMAGING APPROACH

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ABSTRACT

Intramuscular hemangiomas are rare benign vascular tumors arising within skeletal muscle. Given their nonspecific clinical features, imaging is essential for diagnosis. A 30-year-old female presented with a long-standing painless mass in the lower left forearm for over 20 years. Over the past month, she reported intermittent pain around the mass accompanied by stiffness of the forearm and hand, exacerbated by physical exertion. Physical examination revealed a tender mass without skin discoloration. Radiography revealed multiple soft tissue phleboliths, while ultrasonography revealed an isoechoic hypervascular lesion with internal calcifications, both suggestive of a vascular lesion. MRI showed a T1 isointense, T2 hyperintense lesion with marked post-contrast enhancement, localized to the superficial-deep volar aspect of anterior compartments of the distal left forearm, attached to the flexor muscles, with internal calcifications. MRI offered precise tissue characterization and extension, consistent with cavernous intramuscular hemangioma. Integrated imaging was essential in providing complementary diagnostic information.

Keywords: intramuscular hemangioma, vascular malformation, MRI