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Aims and Scope

Mission statement: To advance the scientific basis of human pathology by the publication (encouragement and dissemination) of high quality research (including molecular and translational studies) and thereby contribute to patient care. Manuscripts of original studies reinforcing the evidence base of modern diagnostic pathology, using immunocytochemical, molecular and ultrastructural techniques, will be welcomed. In addition, papers on critical evaluation of diagnostic criteria but also broadsheets and guidelines with a solid evidence base will be considered. Consideration will also be given to reports of work in other fields relevant to the understanding of human pathology as well as manuscripts on the application of new methods and techniques in pathology. Submission of purely experimental articles is discouraged but manuscripts on experimental work applicable to diagnostic pathology are welcomed. Biomarker studies are welcomed but need to abide by strict rules (e.g. REMARK) of adequate sample size and relevant marker choice. Single marker studies on limited patient series without validated application will as a rule not be considered. Case reports will only be considered when they provide substantial new information with an impact on understanding disease or diagnostic practice.

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Abstracts

with bone grafting, Pauwels osteotomy and plate osteosynthesis using DCS with favorable recovery. At that time, histopathology was negative for malignancy and the radiologic data supported the findings. The patient was stationary on routine radiologic examination(available-end 2013). In 2017, presented with pain/difficulty walking, radiology showed the presence of the osteosynthetic metallic material and changes indicative of malignancy, no metastasis. Arteriography with right AFP embolisation and surgical biopsy were done, followed by segmental femoral resection with modular bipolar prosthesis, good recovery. The surgical specimens were adequately processed-histopathologically/immunohistochemically examined.

Results: On microscopy, histopathological profile was:conventional osteosarcoma with extension in surrounding soft tissue. Immunohistochemic profile: CD56 difusely positive, MDM2-focally positive, S100-positive, Ki67-positive in 40 % of neoplastic cells.

Conclusion: Although very rare, published cases of osteosarcoma secondary to metallic implants do exist. Such cases should be reported because the literature does not provide sufficient data and further studies are needed in assesing additional risk factors, such as infection and trauma.

PS-23-005

New approach to understanding of appearance and progression of osteoarthrosis

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Objective: To study the structural features of the cartilage and the tidemark under osteoarthrosis, to determine the function of the tidemark while the destruction of osteocartilaginous tissue.

Method: We used the following methods: histological and electronmicroscopic methods were used for studying the structural features of normal articular cartilage and articular cartilage under osteoarthrosis; immunohistochemical study of p53, osteopontin, osteonectin, type I collagen, type II collagen and MMP1 receptors.

Results: Articular cartilage is represented by two clearly delineated zones (noncalcified and calcified cartilage) that have different histochemical and electron microscopic structural features of parenchymal and stromal components, the tidemark is the boundary between them. Under osteoarthrosis it has qualitative (changes in hematoxylin staining intensity, Van Gieson's staining, PAS reaction, p53, OPN receptors) and quantitative (thickening, dublication, fragmentation and even total disappearance) transformations. This is followed by changes in the structure of articular cartilage and subchondral bone.

Conclusion: Under osteoarthrosis the articular cartilage in accompanied by progressive destruction of extracellular matrix and dystrophic changes of chondrocytes. It is connected with preceding modification of the tidemark that on the one hand serves as the barrier between osteolytic properties of synovial fluid and subchondral bone, and on the other hand—between osteosynthetic stimuli of the bony tissue.

PS-23-006

A case of fatal phosphaturic mesenchymal tumour

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Objective: Phosphaturic mesenchymal tumour (PMT) is a rare neoplasm; the biologic behavior of PMT is currently under investigation. We present a case of PMT with a protracted course over 12 years leading to a fatal outcome.

Method: A 39 year-old man presented with weakness in 2004 and was found to have decreased serum phosphorus, phosphaturia and lack of 1, 25-dihydroxyvitamin D3. Four years later he developed a painful left calf mass. The lesion was resected, but recurred causing extreme pain and dysfunction. Above-knee amputation was performed.

Results: Dissection of the specimen showed multiple soft tissue tumours in all muscle compartments of the calf, measuring up to 18 cm. An additional, separate lesion was found in the distal tibial metaphysis. Histological examination of all lesions showed a cellular spindle cell neoplasm with variously sized vessels, wide vessel-like spaces and scattered deposits of calcified extracellular material. The tumour infiltrated skeletal muscles, subcutaneous fat and the proximal end of the fibula. The tibial lesion had identical histology. Three years after the amputation the patient developed multiple metastases in both lungs and died.

Conclusion: This case illustrates that PMT may not only disseminate locally but also metastasize and cause death.

PS-23-008

Cell cycle regulatory protein expression in multinucleated giant cells: Do they proliferate?

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Objective: By studying replication activity in the mononuclear cell fraction of giant cell tumour of bone (GCTB) we detected cell cycle regulatory proteins also in multinucleated giant cells. Our objective was to test if osteoclast-like giant cells can enter and progress into the cell cycle.

Method: Formalin-fixed, paraffin-embedded sections from 30 GCTB cases were analyzed for the expression of nuclear proteins involved in driving or controling phases of cell cycle progression.

Results: In giant cells, of Ki67 protein specific antibodies, SP6 stained most cell nuclei, while B56 and Mib1; and the replication licensing mcm2 stained occasionally a few. Many nuclei were positive for the cyclin dependent kinase (cdk) 4/6 and all nuclei were stained for its complexing partner cyclin D1. Of later G1/S-phase promoters, cdk2 was rare, while its compexing partner cyclin E, their cdk inhibitor p21waf1, the tumour suppressor p53 and the cell cycle controling cyclin G1 were seen in most giant cell nuclei. However, none of the post-G1 phase markers including cyclin A, geminin or aurora B were noticed in giant cells.

Conclusion: Multinucleated osteoclast-like giant cells show early signs of cell replication which, however, is arrested at late G1-phase possibly driven by p53 induced p21waf1 and cyclin G1 upregulation.

PS-23-009

Coexisting cutaneous Kaposi sarcoma with Leishmania

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Objective: Infection with Leishmania spp is common in HIV (+) patients residing in endemic areas. We herewith describe a rare case of coexistence of Kaposi sarcoma (KS) and leishmaniosis in the same cutaneous lesion in a HIV (+) patient.

Method: A 43-year old HIV (+) patient presented with fever of unknown origin, as well as several violet-colored, elevated, nodular lesions and plaques on the neck, forehead and both hands. A cutaneous punch biopsy was performed, with the working diagnosis of KS

Results: Histology showed typical appearance of KS; neoplastic endothelial cells were immunopositive for HHV-8. Moreover, the lesion abounded with macrophages containing intracytoplasmic, dot- or ring-like inclusions, of a bluish-purple appearance with a Giemsa stain; coexistent leishmaniosis was hinted and confirmed by means of a polymerase