PEDIATRIC LYMPHOMATOID PAPULOSIS WITH CYTOTOXIC IMMUNOPHENOTYPE: CASE REPORT

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According to the WHO/EORTC classification, lymphomatoid papulosis (LyP) is a recurrent, self-healing papular eruption belonging to the spectrum of cutaneous CD30+ lymphoproliferative disorders. The neoplastic cell is typically a CD4+ T-lymphocyte, also manifesting CD30 expression. Three main histologic subtypes are recognized: type A (histiocytic), type B (mycosis fungoides-like), and type C (anaplastic large cell lymphoma-like). Although it is well documented in adults, LyP is very uncommon in children. Clinical presentation and histopathologic features of LyP in children are comparable to those in adults. A 6-year-old boy presented with multiple erythematous papules, measuring up to 1 cm in diameter, located predominantly on his legs. Over time, some papules would necrotize, as new ones appeared. His past medical history was unremarkable. According to this clinical presentation, referring differential diagnosis included Langerhans cell histiocytosis or lymphoproliferative disease. Punch biopsy of skin lesions was performed. Microscopically, skin sections showed a dense, nodular, perivascular infiltrate that extended throughout the full thickness of the dermis. The infiltrate consisted predominantly of large, blast-like lymphoid cells with moderate amounts of cytoplasm and irregular vesicular nuclei with prominent nucleoli. Relatively frequent mitotic figures and apoptotic bodies were seen. The blasts were admixed with occasional small lymphocytes, neutrophils and eosinophils. The overlying epidermis was ulcerated, focally infiltrated with lymphoid cells. Immunostaining revealed blast cells of T-cell lineage, with expression of pan-T-cell antigens CD2, CD3, CD5, and lack of CD7. They were positive for CD8 and the cytotoxic molecules perforin, TIA-1 and granzyme B, but negative for CD4. They also showed strong expression of CD30 and weak, focal expression of CD56, but absence of CD57. Staining for beta-F1 was positive, and there was no evidence of Epstein-Barr virus, either by immunohistochemistry (LMP1) or in situ hybridisation (EBERs). These features were consistent with a CD30-positive lymphoproliferative disorder with a cytotoxic phenotype. Definitive diagnosis required clinical correlation. The patient underwent thorough hematologic work-up, and no evidence of underlying systemic lymphoma was detected. Also, transformation of pre-existing mycosis fungoides was excluded. Final diagnosis was consistent with CD8+ lymphomatoid papulosis type C. The patient received only topical corticosteroid therapy, followed by complete regression of skin lesions. After 7-month follow-up, the patient was healthy, with no evidence of disease. The rarity of childhood LyP, the multifocal skin lesions and the atypical histologic features can produce erroneous diagnosis of malignancy, leading to unnecessary aggressive treatment. Nevertheless, compared with the general population, patients with childhood-onset LyP have a significantly increased risk of developing non-Hodgkin lymphoma. That is why they should be carefully monitored throughout their lives.

OTENTIAL MARKERS OF MELANOMA PROGRESSION: PRELIMINARY STUDY ON NODULAR MELANOMA

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Melanoma is one of the most aggressive cancers with a constantly increasing incidence, the migration, invasion and growth of which depend on adhesive and proteolytic mechanisms of neoplastic cells. Matrix metalloproteinases (MMPs) involved in degradation and remodeling of surrounding tissue play a critical role in tumor progression. Laminin and galectin-3, involved in cell adhesion, migration and growth are also substrates for MMP-2 and MMP-9. Therefore, we presumed that they might be used as potential markers of melanoma progression. Protein expression patterns of MMP2, MMP9, laminin, and galectin-3 were determined by immunohistochemical analysis of tumor tissue obtained from 27 nodular melanoma cases (15 female and 12 male). The values obtained were correlated using Spearman correlation rank.

The median patient age was 60 years, median of tumor thickness 2.3 mm and median of Clark's level of penetration 3. Positive lymph nodes were shown in 48% of cases. All markers were expressed at higher values in melanoma cells than in surrounding tissue. MMP2 was more prominent in the zone with strong lymphocyte infiltration (P=0.018) and deeper layers of tumor penetration. MMP2 exhibited stronger correlation with laminin (P=0.035), while MMP9 correlated with galectin-3 expression (P<0.001). Laminin and galectin-3 were coexpressed in melanoma cells (P=0.044). Although not significant, decreased expression of both markers was found in cases with positive lymph nodes. The study pinpointed the possible markers of melanoma progression. A higher MMP2 expression was found in deeper layers of tumor penetration. However, additional studies in a larger cohort and other histologic melanoma types are necessary to reach more precise conclusions.

TUBULOCYSTIC CARCINOMA OF THE KIDNEY

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Tubulocystic carcinoma, in the past also known by the terms Bellini epithelioma and low grade collecting duct carcinoma, is a subtype of renal cell carcinoma, not classified in the 2004 WHO classification. It has a distinctive histology, composed of variably sized tubules and cysts surrounded by fibrotic stroma. Recent studies of tubulocystic carcinoma showed it to have a strong male predominance and low but definitive metastatic potential. A 71-year-old man with unspecific abdominal pain underwent ultrasonography and computed tomography studies, which revealed a tumorous mass of the kidney. Nephrectomy with ureteretomy was performed and materials were referred for histopathologic analysis. The tumor measured up to 4.5 cm and was partly cystic with areas of hemorrhage and necrosis. Microscopically, it was composed of irregular cysts and tubules lined with single layer of cuboidal to flat epithelial cells with abundant eosinophilic cytoplasm and large nuclei with prominent nucleoli. Immunohistochemically, tumor cells were diffusely positive for CK7. Histopathologic report corresponded to unclassified renal cell carcinoma , nuclear grade 3 according to WHO classification, and to tubulocystic carcinoma according to recent literature. Tubulocystic carcinoma is an uncommon tumor with 55 cases reported in the literature. In the Ljudevit Jurak University Department of Pathology archive, two cases of this tumor were diagnosed in the last five years. It is important to recognize this rare subtype of renal carcinoma, although appearing relatively bland, tubulocystic carcinoma can behave aggressively.

ESTROGEN RECEPTOR POSITIVE CELLS IN GASTRIC AND DUODENAL ULCER: A PILOT STUDY

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It is known that gastric and duodenal peptic ulcer is more common in males. Estrogen has an anti-inflammatory effect, acts on prostaglandin E2 induced mastocyte degranulation and release of vascular endothelial growth factor (VEGF), and also has a role in experimental model of wound healing by converting fibroblasts into myofibroblasts. It also has a sex-specific protective effect in gastroduodenal ulcer. The aim of the present study was to investigate the expression of estrogen receptors alpha (ERα) in gastric and duodenal ulcer tissue in order to elucidate the observed sex difference in the incidence and impairment process of this disease. Twelve surgical specimens of gastric and duodenal ulcer biopsies were found in the database of the Ljudevit Jurak University Department of Pathology, Sestre milosrdnice University Hospital Center, during the 2000-2010 period. There were six male (aged 30-74 years) and six female (aged 50-81 years) patients. Paraffin embedded gastric and duodenal ulcer tissue was cut on microtome and analyzed on routine stained sections and immunohistochemically with ERα monoclonal antibody. Estrogen receptor positive cells were found in nine of twelve biopsies. ERα positive cells were neutrophils and fibroblasts in the zone of detritus, while ERα positive mastocytes were found in the zone of granulation tissue and fi-