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GENITOURINÁRNE MALIGNITY

Kalavska K, Chovanec M, Zatovicova M, Takacova M, Gronesova P, Svetlovska D, Baratova M, Miskovska V, Obertova J, Palacka P, Rajec J, Sycova-Mila Z, Cierna Z, Kajo K, Spanik S, Babal P, Mardiak J, Pastorekova S, Mego M.

Prognostic value of serum carbonic anhydrase IX (CA IX) in testicular germ cell tumor patients

Oncology Lett, 2016 (In press)

Background: Although testicular germ cell tumors (TGCTs) belong to the most chemosensitive solid tumors, a small portion of patients fails to be cured after cisplatin based 1st line chemotherapy. Up-regulation of carbonic anhydrase (CA IX) in various solid tumors is associated with inferior outcome. This prospective study investigated the prognostic value of serum CA IX level in TGCTs.

Material and methods: 83 patients (16 non-metastatic, 57 metastatic chemotherapy-naïve and 10 relapsed chemotherapy-pretreated) starting new line of chemotherapy and 35 healthy controls were enrolled to this study. Serum CA IX values were determined using ELISA-assay and intratumoral CA IX was analyzed by immunohistochemistry using monoclonal antibodies.

Results: Metastatic chemotherapy-naïve patients had significantly higher mean CA IX serum levels (pg/mL) compared to healthy controls (490.6 vs. 249.6, $p = 0.005$), while there was no difference in serum CA IX levels in non-metastatic or relapsed TGCTs patients compared to healthy controls. There was no significant difference in the mean serum CA IX levels between different groups of patients and between the first and second cycle of chemotherapy, nor association with patients/tumor characteristics. Serum CA IX was prognostic neither for progression-free survival (hazard ratio [HR] = 0.81, $p = 0.73$) nor for overall survival (HR = 0.64, $p = 0.48$). However, there was a significant association between the intratumoral CA IX expression and the serum CA IX concentration ($\rho = 0.51$, $p = 0.04$).

Conclusions: This study suggests that serum CA IX level correlates with tumor CA IX expression in TGC patients, but fails to show either prognostic value or association with patients/tumor characteristics.

Ondrusova M, Balogova S, Lehotska V, Kajo K, Mrinakova B, Ondrus D.

Controversies in the management of clinical stage I testicular seminoma

Cent European J Urol. 2016;69(1):35-9.

Introduction: Following orchiectomy patients with clinical stage I (CSI) testicular seminoma may be managed by active surveillance (AS) or adjuvant treatment (radiotherapy or chemotherapy). In view of the published data on long-term toxicity, mainly second malignant neoplasms (SMNs), adjuvant radiotherapy (ART) is currently no longer recommended as adjuvant therapy for these patients. The purpose of our recent study was to compare the impact of two selected treatment approaches - AS versus adjuvant chemotherapy (ACT) on survival in patients with CSI testicular seminoma.

Material and methods: The cross-sectional study analyzed a total of 106 patients collected at a single centre between 4/2008-8/2015, with CSI testicular seminoma, stratified into two groups according to risk-adapted therapeutic approaches.

Results: In group A (low-risk), consisting of 84 patients, who underwent AS, relapse occurred in 10 (11.9%) patients after a mean follow-up of 13.8 months. In group B (high-risk), consisting of 22 patients, who were treated with ACT, relapse occurred in two (9.1%) patients after a mean follow-up of 13.8 months. Overall survival of patients in both groups was 100% with a mean follow-up of 25.3 months. The statistically significant difference in progression-free survival (PFS) between these two groups was not found.

Conclusions: ACT seems to be adequate treatment for patients with high-risk of relapse, as well as AS for those with low-risk of relapse.

Despite its excellent prognosis, optimal management of CSI testicular seminoma remains controversial, with variations in expert opinion and international guidelines.

GYNEKOLOGICKÉ MALIGNITY

Kascak P, Zamecnik M, Bystricky B.

Small Cell Carcinoma of the Ovary (Hypercalcemic Type): Malignant Rhabdoid Tumor

Case Rep Oncol, 2016 (In press)

We present a rare case of malignant rhabdoid tumor (ovarian small cell carcinoma of hypercalcemic type) in a 24-year-old female with fulminant course. Clinically, hypercalcemia was not found at the time of primary diagnosis. However, it appeared later during the course of tumor progression. Histologically, the tumor showed classical features of small cell carcinoma of hypercalcemic type. Therapy included radical surgery with adjuvant chemotherapy. Despite this intensive therapy, the disease recurred and the patient died 10 months after the diagnosis. We discuss the diagnosis and therapy of this tumor, as well as its recent classification as malignant rhabdoid tumor.

PODPORNÁ LIEČBA

Bezdicek M, Lengerova M, Ricna D, Weinbergerova B, Kocmanova I, Volfova P, Drgona L, Poczova M, Mayer J, Racil Z.

Rapid detection of fungal pathogens in bronchoalveolar lavage samples using pan-fungal PCR combined with high resolution melting analysis

Med Mycol, 2016 (In press)

Despite advances in the treatment of invasive fungal diseases (IFD), mortality rates remain high. Moreover, due to the expanding spectrum of causative agents, fast and accurate pathogen identification is necessary. We designed a panfungal polymerase chain reaction (PCR), which targets the highly variable ITS2 region of rDNA genes and uses

high resolution melting analysis (HRM) for subsequent species identification. The sensitivity and specificity of this method was tested on a broad spectrum of the most clinically important fungal pathogens including *Aspergillus* spp., *Candida* spp. and mucormycetes. Despite the fact that fluid from bronchoalveolar lavage (BAL) is one of the most frequently tested materials there is a lack of literature sources aimed at panfungal PCR as an IFD diagnostic tool from BAL samples. The applicability of this method in routine practice was evaluated on 104 BAL samples from immunocompromised patients. Due to high ITS region variability, we obtained divergent melting peaks for different fungal species. Thirteen out of 18 patients with proven or probable IFD were positive. Therefore, the sensitivity, specificity, positive predictive value and negative predictive value of our method were 67%, 100%, 100%, and 94%, respectively. In our assay, fungal pathogens identification is based on HRM, therefore omitting the expensive and time consuming sequencing step. With the high specificity, positive and negative predictive values, short time needed to obtain a result, and low price, the presented assay is intended to be used as a quick screening method for patients at risk of IFD.

NÁDORY HLAVY A KRKU

Svajdler M Jr, Kaspirkova J, Hadravsky L, Laco J, Dubinsky P, Straka L, Ondic O, Michal M, Skalova A.

Origin of cystic squamous cell carcinoma metastases in head and neck lymph nodes: Addition of EBV testing improves diagnostic accuracy

Pathol Res Pract. 2016 Jun;212(6):524-31.

Most cases of cystic squamous cell carcinoma (SCC) metastases in the upper neck are associated with an oropharyngeal primary, namely human papillomavirus (HPV)-associated SCC arising in the palatine or lingual tonsil. A retrospective study was performed on 22 patients who presented with cystic head and neck SCC metastases. The purpose of the study was to find out whether histological characteristics, p16 protein expression, HPV and Epstein-Barr virus (EBV) status could be useful in predicting the localization of the primary tumor. The primary site was identified in 20 of 22 patients and included the oropharynx in 14 patients (63.6%), the nasopharynx in 3 patients (13.6%), the lungs in 2 cases (9%), and the skin of the auricle in one case (4.5%). No primary was found in two pa-

tients (9%). Sixteen of 17 cases (94.1%) originating in Waldayer's ring (oropharynx and nasopharynx), and both cases with an unknown primary showed morphology of non-keratinizing SCC or non-keratinizing SCC with maturation. All tumors with oropharyngeal primary and both cases with unknown primary showed diffuse p16 staining and presence of HPV DNA. All three cystic metastases of nasopharyngeal carcinoma were EBV-positive and p16/HPV-negative. In contrast, cutaneous and pulmonary metastases showed morphology of a well differentiated keratinizing SCC and poorly differentiated keratinizing SCC, respectively, and were HPV/EBV-negative. We confirmed that cystic SCC lymph node metastases of the head and neck region are strongly associated with the occult primary localized in the oropharynx. The oropharyngeal origin should always be corroborated by p16 immunohistochemistry and HPV-specific testing because SCC arising in other sites, such as nasopharynx, skin or lungs may manifest with cystic neck metastases as well. Addition of EBV testing in p16/HPV-negative cases can disclose the nasopharyngeal origin of the cystic neck metastases in a subset of cases.