PATHOLOGICA 2018;110:125-286

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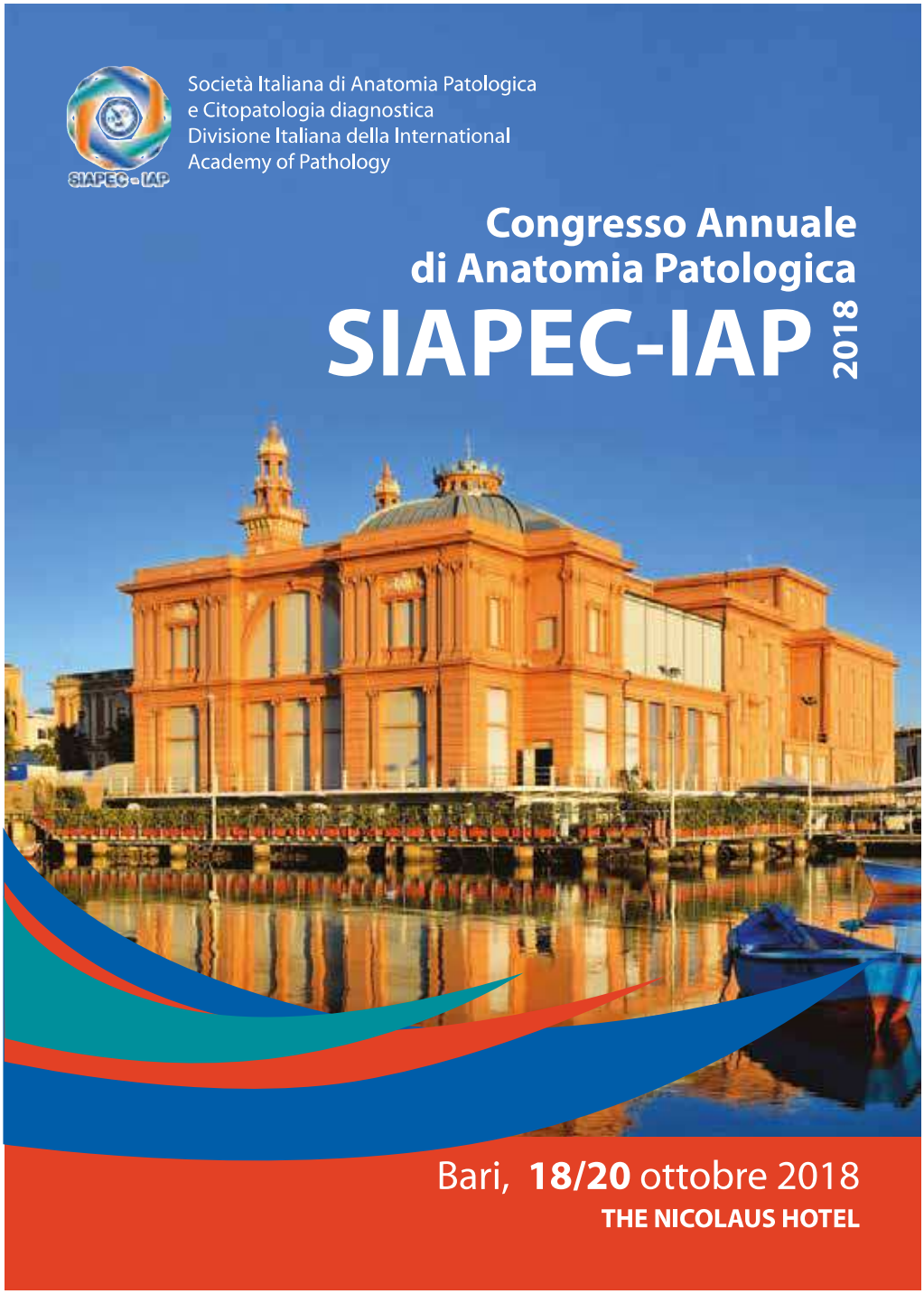

CITOPATOLOGIA

MALIGNANT PLEURAL MESOTHELIOMA WITH "SIGNET-RING" CELLS: A DIAGNOSTIC CHALLENGE AND AN UNUSUAL CASE REPORT

D. Bonazza[1], A. Mangogna[1 2], B. Belmonte[3], A. Romano[1], M. Cortale[1], R. Bulla[2] and F. Zanconati[1]

[1] Department of Medical, Surgical and Health Science, University of Trieste, Trieste, Italy; [2] Department of Life Sciences, University of Trieste, Trieste, Italy; [3] Tumor Immunology Unit, Department of Health Sciences, Human Pathology Section, University of Palermo, Palermo, Sicily, Italy

Background. Malignant pleural mesothelioma (MPM) remains one rare cancer of the pleural surface, typically associated with exposure to asbestos. It has a breathtakingly rapid natural history with a median survival of 6 to 8 months when untreated and a significant economic and social impact. MPM is a disease with limited therapeutic options and its management is still controversial. Diagnosis is usually made by thoracoscopy, which allows multiple biopsies with histological subtyping and is indicated for staging purposes in surgical candidates [1]. Signet-ring cell MPM is an uncommon histological subtype of mesothelioma that exhibit signet-ring features and that can be misdiagnosed as signet-ring cell adenocarcinoma [2]. Exclusion of pleural metastasis of signet-ring cell adenocarcinoma is the critical point for differential diagnosis.

Here we report a case of pleural effusion diagnosed as MPM with neoplastic cells that exhibit prominent signet-ring-like features, which was identified by pleural effusion cell block immunohistochemistry (IHC) and also confirmed by IHC of histological sections from pleural biopsy specimen.

Results. A 71-year-old Caucasian male was admitted to our hospital with dyspnea, fatigue and weight loss. His past medical history was unremarkable, and he has not recently used drugs. He does not have family history of note and was not on regular medication. There was a history of exposure to asbestos during the occupation. After clinical examination, computed tomography of the chest showed left sided massive pleural effusion and likely pleural plaques. A thoracentesis was performed and serohemorrhagic fluid was determined. Exfoliative cytological examination of pleural effusion showed reactive mesothelial cells and some clear cells discretely showing intracytoplasmic vacuoles and eccentric atypical nuclei reminiscent of ''signet-ring'' cells. In view of signet-ring cells, diagnosis of likely metastatic adenocarcinoma with background mesothelial cells was done. Screening for a primary tumor of other parts of the body was negative. Pleural effusion cell block IHC was CEA, TTF-1, CK20, CDX2 negative and CK5/6, CK7, EMA (membranous), WT-1 (nuclear), calretinin positive suggesting a MPM diagnosis. Finally, also immunohistochemical analysis of pleural biopsy confirmed the diagnosis of MPM. The patient was considered operable for his good performance status. It was performed a pleurectomy/decortication surgery with atypical lung resection of the left upper lobe. Histopathological examination of surgical specimen detected a biphasic mesothelioma with signet-ring-like features.

Discussion. Mesotheliomas have been classified into four major histologic subtypes: epithelioid, sarcomatoid, mixed epithelioid and sarcomatoid (biphasic), and desmoplastic, the most common of which is epithelioid [3]. The signet-ring configuration seen in adenocarcinomas has traditionally been associated with round shapes and eccentric nuclei and with the accumulation of large amounts of intracytoplasmic mucin [4]. Signet-ring cell carcinomas can arise in a wide variety of organs, including lung, stomach, colon, breast, urinary bladder, pancreas, salivary glands, prostate, as well in stromal tumors of the ovary and testis [5-9].

Conclusions. This case illustrates that pathologists should know that mesotheliomas can also present prominent signet-ring-like features and that immunohistochemistry of histological sections from a cell block combined with the immunohistochemical studies may be helpful to determine the type of malignancy.

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IMMUNOHISTOCHEMICAL DETECTION OF CD56, CK19, GALECTIN 3, HBME1 AND BRAF V600E IN THYROID FOLLICULAR PROLIFERATIONS ON CELL BLOCK: PRELIMINARY STUDY

G. Gazzano, S. Palazzo, L. Ermellino, L. Alasio, , R. Consonni, A. Grindati, M. Donisi, M. Biancardi, T. Zacchi, S. Sernagiotto, S. Gatti, R. Giardini

Istituto Auxologico Italia no, IRCCS, Ospedale Capitanio

Objective. The present study was aimed to evaluate the diagnostic reliability of a IHC panel (CD56, CK19, Galectin 3, HBME1 and BRAF) on conventional cell block for the investigation of thyroid follicular proliferation.

Material and Methods. We selected 36 patients from 1100 thyroid FNA cases collected during last year. All selected cases, defined as follicular proliferations in according with guidelines of The Bethesda System for Reporting Thyroid Cytopathology, 2008; Consensus Statement AIT, SIE, SIAPEC-IAP for Class and Reporting of Thyroid Cytology, 2014 and subsequently undergone to thyroidectomy. Comparative analysis has been performed between cytological and histological slides. Cell blocks of all cases have been quantitatively evaluated and 19 of them were excluded because poor cellularity. The remaining cases (8 TIR3b; 2 TIR4 and 7 TIR5) were stained with CD56 (Cell Marque,MRQ-42), Mesothelial cell(Cell Marque, HBME-1), CK19 (Cell Marque, A53- B/A2.26) and Galectin-3 (Cell Marque, 9C4) has been done by automatic device (BENCHMARK XT) on cell block before surgery.

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