

showed a mass invading through the rectal wall. The biopsy showed an atypical glandular proliferation and a diagnosis of “Probably adenocarcinoma” was made and the patient was given neoadjuvant chemoradiotherapy followed by an anterior resection.

**Results:** Anterior resection specimen showed a white, firm, ill-defined mass involving all layers of the rectum and microscopically features of endometriosis. Immunohistochemistry showed that the glands were ER and CK7 positive and the CK20 and CEA negative. Immunohistochemistry was repeated on the original biopsy which showed the same immunoprofile.

**Conclusion:** This case represents a rare presentation of endometriosis of the rectum mimicking adenocarcinoma, clinically, histologically and radiologically. Endometriosis must always come to mind in women with unusual glands in the colorectum. Immunohistochemistry is crucial for a correct diagnosis to be made.

### 013

#### **Immunohistochemical assessment of epidermal growth factor receptor (EGFR) in relationship with human papillomavirus (HPV) L1 capsid protein in cervical squamous intraepithelial lesions**

R. Balan<sup>\*</sup>, C. Amalinei, S. Giusca, V. Gheorghita, D. Ciobanu, I. D. Caruntu

<sup>\*</sup>University of Medicine, Dept. of Morphological Sciences, Iasi, Romania

**Objective:** We analyzed the immunohistochemical pattern of epidermal growth factor receptor (EGFR) in cervical squamous intraepithelial lesions (SILs) in correlation with L1 HPV capsid protein in order to determine the relationship between EGFR expression and the infection status of human papillomavirus (HPV).

**Method:** The study included 40 cases, 24 LSIL (low grade SIL) (CIN1, cervical intraepithelial neoplasia) and 16 HSIL (high grade SIL) (six cases of CIN2 and ten cases of CIN3). The immunorexpression of L1 HPV protein was assessed on conventional cervico-vaginal smears and EGFR was immunohistochemically evaluated on the corresponding cervical biopsies.

**Results:** The HPV L1 capsid protein was expressed in 45.83% of LSIL and 25% of HSIL. EGFR was overexpressed in 62.4% of HSIL (58.4% CIN2 and 41.6% CIN3) and 37.6% LSIL.

**Conclusion:** The immunorexpression of L1 HPV has clinical application in the progression assessment of the cervical precancerous lesions without a correlation to the grade of the cervical SIL. EGFR is expressed by all proliferating squamous epithelial cells, thus corresponding

with the grade of SIL. The evaluation of EGFR status, correlated with L1 HPV protein expression, can provide useful data of progression risk of cervical squamous intraepithelial lesions.

### 014

#### **The impact of P-gp/topoisomerase I and P-gp/HER2 immunophenotypes on ovarian carcinoma features**

J. Bar<sup>\*</sup>, K. Szczudło, P. Nowak, A. Lis-Nawara, L. Noga, J. Rabczyński, M. Jeleń

<sup>\*</sup>Medical University, Wrocław, Poland

**Objective:** Up to now, several biological parameters might be considered as prognostic and predictive factors in ovarian carcinomas. So, we evaluated the immunohistochemical expression of P-gp, topoisomerase I (topo I) and HER2 and its correlation with variables of ovarian carcinomas.

**Method:** P-gp, topo I and HER2 expression was analyzed on 132 malignant ovarian tumors using immunohistochemistry (IHC). The immunorexpression of HER2 was confirmed by fluorescence in situ hybridization (FISH) analysis.

**Results:** Expression of P-gp, topo I and HER2 was observed in 38.4%, 51.6%, 63.7% ovarian carcinomas respectively. Comparison studies between the FISH assays for HER2 and the corresponding IHC showed 89% concordance. P-gp was associated with serous ovarian carcinomas ( $p=0.02$ ) and with well/moderately differentiated tumors ( $p=0.03$ ). The differences between P-gp expression and FIGO stage were on statistical borderline ( $p=0.07$ ). Positive correlation between P-gp and topo I expression in ovarian carcinomas was revealed ( $p=0.005$ ). The P-gp/topo I-positive immunophenotype was associated with serous ovarian carcinomas ( $p=0.01$ ) and well/moderately differentiated tumors ( $p=0.01$ ). The P-gp/HER2-positive cases show trend towards higher occurrence in III/IV than I/II FIGO stages ( $p=0.07$ ).

**Conclusion:** This study revealed that individual pathological features of ovarian cancers are associated with activation of P-gp/topo I or P-gp/HER2 immunophenotypes.

### 015

#### **Primary malignant nerve sheath tumor of the uterine cervix: a case report and literature review**

N. Basheska<sup>\*</sup>, S. Veljanovska

<sup>\*</sup>Clinic of Radioth. and Oncology, Dept. of Histopathology, Skopje, Macedonia

**Objective:** Primary malignant nerve sheath tumor (MNST) of the uterine cervix is an extremely rare neoplasm. We

report another case of this uncommon tumor and review all previously documented cases.

**Method:** The repeated curettements in a 57-year-old woman with a history of prolonged vaginal bleeding revealed polypoid fragments of a sarcomatous neoplasm. In August 1997, total abdominal hysterectomy with bilateral salpingo-oophorectomy was performed. Postoperatively, the patient received six courses of chemotherapy. Twenty-three months later, a local vaginal and left parametrial recurrence appeared and persisted for months despite the external radiotherapy and chemotherapy implemented. Fifty-seven months following the surgery, the patient died from lung metastases.

**Results:** The cervix was enlarged, markedly distorted by 5.5×2.5×2.5-cm neoplasm involving predominantly the upper lip. Microscopically, the tumor had a variable sarcomatous appearance, suggestive of a MNST. Immunohistochemical examination demonstrated that many of the tumor cells reacted only with S-100 and vimentin.

**Conclusion:** Only nine cases of MNST at this location have been reported presenting as polypoid masses measuring from 1.2 to 6 cm, occurring in patients ranging in age from 22 to 73 years. This additional case suggests that primary MNST of the uterine cervix appear to have clinical and pathological features similar to MNST at other locations.

#### 016

##### **Sarcomatoid squamous cell carcinoma of the uterine cervix: an HPV-related tumor with epithelial origin**

L. Bejan \*, S. Stolnicu

\*Emergency County Hospital, Dept. of Pathology, Targu Mures, Romania

**Objective:** Sarcomatoid squamous cell carcinoma (SSCS) is a well-documented entity elsewhere but occurs rarely in the female genital tract with only 20 reported cases in the uterine cervix.

**Method:** We present a SSCS in which a diagnostic immunophenotype excluded other malignant tumors.

**Results:** A 72-year-old woman had abnormal vaginal bleeding and a cervical mass which was treated by radical hysterectomy. Macroscopically, the cervix revealed a 4-cm soft, irregular, polypoid tumor. Histologically, the tumor had minor areas of poorly differentiated classic keratinizing squamous component which was overgrown by a well-delineated, secondary extensive and heterogeneous growth of spindle or round cell sarcomatoid elements. Immunohistochemically, both had a similar phenotype which was positive for CAM5.2, AE1/AE3, CK5/6, p63 and p16, suggesting a squamous identity. Actin and H-caldesmon were negative in both components but vimentin was

positive only in the sarcomatoid component. PCR demonstrated the presence of HPV16.

**Conclusion:** The positivity of the sarcoma-like component for epithelial markers and p16 favours a common epithelial squamous origin of both components of the lesion and an association with HPV- infection. Since the tumor has a biphasic pattern, immunohistochemistry must be performed to exclude other malignant tumors that may have different treatment and prognosis.

#### 017

##### **MSI and mucinous differentiation in uterine endometrioid carcinoma**

I. Busmanis \*, I. Chew

\*Singapore General Hospital, Dept. of Pathology, Singapore

**Objective:** In addition to morphologic correlates described in cases of endometrioid carcinoma (EC) in patients with HNPCC, a feature in colonic MSI malignancies is mucinous differentiation. This study was aimed to examine if the presence of mucinous differentiation in EC affords any predictive value of likelihood of MSI positivity and also to determine if any clinico-morphologic features characterise this particular group. No patients in this series were known to have Lynch syndrome.

**Method:** A total of 11 cases were extracted from SGH files of nine hysterectomy and two curettage specimens and immunohistochemistry performed for four mismatch repair proteins (MMRP). Nuclear reactivity was accorded a positive result.

**Results:** Median age was 57 years old. Four cases showed normal expression of MMRP. Seven cases showed abnormal expression as follows: 3 cases; MSH2+/MSH6+ and MLH1-/PMS2—2 cases; MSH2+/MSH6- and MLH1+/PMS2- 2 cases; MSH2+/MSH6- and MLH1+/PMS2+. Of six cases, one tumour was isthmic; five tumours were stage Ia and one stage Ib. Two of each were grades I, II, and III.

**Conclusion:** A total of 7/11 (63%) cases of EC with mucinous differentiation were MSI+, a higher incidence than reported for conventional EC. No specific correlation was seen with high grade, isthmic location or lymphocytic reaction, as described in HNPCC.

#### 018

##### **miRNA expression and neoplastic transformation in the uterine cervix**

P. Castillo \*, C. Svanholm-Barrie, M. del Pino, I. Alonso, V. Fusté, J. Gaber, D. H. Persing, J. Ordi

\*Hospital Clínic Barcelona, Dept. of Pathology, Spain

**Objective:** To determine the micro RNA expression in normal uterine cervix (NUC) and carcinomas of the uterine