Objective: Primary lymphoma of female genital tract is rare and only 0.3%–1.5% of extra-nodal non Hodgkin' lymphomas. The cervix is the second common site in literatures review. The diagnosis is difficult due to submucosal stromal lesion and non-specific manifestation without constitutional 'B-cell' symptoms. Combined chemotherapy (CHOP) is mainstay for treatment.

Methods: Review of a case and literatures.

Results: A 39 years-old woman presented to the gynecological clinic with repeated vaginal discharge, pelvic discomfort for 4 months. Her annual Pap test was low-grade squamous intraepithelial lesion. During pelvic examination, a large 6×6 cm. Infiltrative bulky cervical mass was visualized. Rectovaginal examination found cervical tumor extended to parametrial tissue both sides, fixating to the left pelvic sidewall. The colposcopic biopsy result was cervicitis. The deep excisional procedure was performed and result was atypical lymphoid proliferation. Immunohistochemistry (IHC) were positive for CD20, BCL6 (90%), Ki 67 (50%–60%). IHC were negative for AE1/AE3. The diagnosis was diffuse large B-cell lymphoma (WHO Classification 2008). The magnetic resonance imaging show large cervical mass 4.7×4.9×5.3 cm at posterior cervix with invasion to stroma, left parametrium and protrusion into upper vagina. No upper abdominal metastasis and lymphadenopathy were observed. Bone marrow biopsy result was hypocellular and compatible with Ann Arbor stage I. The patient was sent to hematologist and received R-CHOP (Cyclophosphamide, Doxorubicin, Vincristine, Prednisone, and Rituximab) for 8 cycles and achieved CR. The patient is remaining remission after 55 months follow up.

Conclusion: Primary lymphoma of cervix is extremely rare and deep excisional procedure was useful for diagnosis. CHOP is primary treatment and improved survival outcome.

Poster (C09)

Gynecologic Cancer Screening

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Temporary elevation of serum squamous cell carcinoma antigen during follow-up and its clinical significance

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Objective: We evaluated the role of serum squamous cell carcinoma antigen (SCC-Ag) in predicting recurrence after primary treatment.

Methods: Of 4,814 cervical cancer patients at Chang Gung Memorial Hospital Linkou Medical Center in 2000–2018, 2,206

patients had SCC-Ag testing at diagnosis.

Results: Excluding 27 patients with incomplete medical documents, 1,091 (50.1%) showed elevated SCC-Ag, in whom 1,016 was squamous cell carcinoma. 81.8% cases with advanced stage (FIGO IIB or more), and 61.6% with a large tumor in early stage (IB3, IIA2) had elevated SCC-Ag. Seven hundred sixty-nine (75.7%) of the 1,016 patients had CR to primary treatment, and their SCC-Ag returned to normal. A total of 207 patients had re-elevation of SCC-Ag at follow-up, in which 110 cases had recurrence. SCC-Ag re-elevation before imaging diagnosis was noted in 79 (71.8%) of the recurred, 14 (12.7%) patients had concurrent SCC-Ag re-elevation and imaging diagnosis of recurrence, another 11 (10.0%) had recurrence before SCC re-elevation. Four had recurrences with normal SCC-Ag. 97 of the 207 patients with re-elevated SCC showed NED throughout follow-up, and their SCC-Ag returned to normal within six months. Forty-four (45.3%) of the SCC elevation may be attributed to impaired renal function. Four patients had skin lesions. The cause of elevation in another 47 (48.5%) could not be recognized. The overall sensitivity of SCC-Ag for detecting recurrence is 86.8%, specificity 85.2%, PPV 50.8%, and NPV 97.4%.

Conclusion: Serum SCC-Ag levels can be a useful tool for screening for cancer recurrence after primary treatment in patients with cervical squamous cell carcinoma.

Poster (C10)

Cervical Cancer

<https://doi.org/10.3802/jgo.2021.32.S1.C10>

Transcription factor homeobox D9 drives the malignant phenotype of HPV18-positive cervical cancer cells via binding to the viral early promoter

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Objective: Transcription factor homeobox D9 (HOXD9) is highly expressed in cervical cancer. Previously we reported HOXD9 bound to the P97 promoter of HPV16, and regulated early oncogenes E6 and E7. In this study, we investigated whether HOXD9 regulated the P105 promoter of HPV18 and examined the role of HOXD9 in intracellular signaling of cervical cancer.

Methods: HOXD9 knockdown HPV18 positive cervical cancer cell lines SKG-1 and Hela were used in this study. Cell cycle

and apoptosis analysis was performed by flow cytometry. Gene expression in mock and shHOXD9 SKG-I cells was analyzed by microarray.

Results: HOXD9 inhibition suppressed P105 promoter activity and E6/E7 gene expression in HPV18 positive cervical cancer cell line. Cell cycle analysis indicated that HOXD9 blocking increased the ratio of G1 phase cells, decreased cell proliferation and enhanced apoptosis. HOXD9 suppression did not change the P53 gene level, but restored the P53 protein expression. Furthermore, the expression of MCM2 and PCNA, the target genes of transcription factor E2F, was decreased in HOXD9 inhibited cells. Finally, promoter assay and chromatin immunoprecipitation assay showed that HOXD9 directly bound to the P105 promoter and activated its function.

Conclusion: HOXD9 played an important role in cell proliferation and immortalization by regulating the P105 promoter in HPV18 positive cervical cancer. These findings indicated that HOXD9 might be a promising therapeutic target in cervical cancer.

Poster (C11)

Preinvasive Disease of Cervix, Vulva, and Vagina

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The overtreatment rate of “see and treat” approach in high-grade squamous cervical cytology at Ramathibodi hospital

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Objective: To evaluate an overtreatment rate of “see and treat” (S&T) approach in patients with high-grade squamous intraepithelial lesion (HSIL) cervical cytology and identify the clinical factors associated with the overtreatment.

Methods: Patients with HSIL cytology undergoing colposcopy and loop electrosurgical excision procedure (LEEP) in a single visit or S&T approach between January 2005 to December 2019 at colposcopic clinic, Ramathibodi hospital were retrospectively reviewed. Overtreatment was defined as the pathological examination of LEEP specimen reported cervical intraepithelial neoplasia 1 or normal results. The overtreatment rate and complication event from LEEP was explored. Clinical factors affecting the overtreatment were analyzed with a logistic regression model.

Results: There were 220 cases identified. The overtreatment rate was 11.4%. The surgical complications composed of 3 cases

with hemorrhage (1.36%) and 9 cases with infection (4.09%). In univariable analysis, factors associated with the overtreatment were present cytology and colposcopic diagnosis with p-value of 0.006 and 0.001, respectively. In multivariable analysis, present cytologic results of non-HSIL compared to HSIL and colposcopic diagnosis (low-grade lesion or normal finding compared to high grade lesion or cancer) were presented adjusted odds ratio of 13.81 and 3.58 (95% confidence interval [CI]=1.23–155.20; p=0.033 and 95% CI=1.32–9.74; p=0.013, respectively).

Conclusion: The overtreatment rate in S&T approach was 11.4%. The independent factors associated with overtreatment rate were the present cytology and colposcopic diagnosis.

Poster (C12)

Cervical Cancer

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To compare the pre-operative and post operative staging in early stages of cervical cancer on the basis of changes made in FIGO 2018 staging

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Objective: To compare the pre-operative and post operative staging in early stages of cervical cancer on the basis of changes made in International Federation of Gynecology and Obstetrics (FIGO) 2018 staging.

Methods: An observational hospital-based study was conducted in which 57 cases were included who were surgically staged. Cases were re-staged on the basis of the 2018 FIGO staging and clinico-radiological and surgico-pathological factors were considered. Data was collected to identify patients who were upstaged or downstage, need of adjuvant treatment were analysed.

Results: The 86.2% patients had undergone preoperative imaging. Ultrasound was the most commonly done follow by magnetic resonance imaging and computed tomography scan. The 20 patients were upstaged and 5 patients were downstage on the basis of final histopathological report. The 27% patients were given adjuvant treatment. The most common factor was the change in tumor size followed by parametrical invasion and the least common was lymphovascular space invasion.

Conclusion: The new FIGO 2018 staging system led to an upstage in 35.08% patients and helps in better delineation of treatment both primary and adjuvant, if needed.