ISP-13-6 Clinical significance of FOXP3-positive regulatory T cells in cervical cancer

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[Background] The forkhead box P3 (FOXP3) transcription factor is now widely used as a surrogate marker for Tregs, as its expression is essential for the development of natural CD4 + CD25 + Tregs. Interestingly, FOXP3 expression has been shown to identify functionally suppressive regulatory populations, independently of their CD25 expression levels. FOXP3 remains the best marker for the quantification of Treg populations in routinely-fixed paraffin-embedded tissues.[Objectives] The aim of the present study was to analyze the prognostic impacts of FOXP3 + tumor-infiltrating regulatory T cell.[Methods] This retrospective study is based on 228 cervical cancer patients who underwent primary treatment from 1998 to 2005. We examined the numbers of FOXP3 + lymphocytes using immunohistochemical assessment of paraffin-embedded primary lesion with carcinoma in situ and FIGO stage I-II cervical cancer. And we evaluate the association between the number of intratumoral FOXP3 + (itFOXP3 +) lymphocytes and clinical and prognostic significances. For analysis, itFOXP3 + cells were dichotomized by a cut-off point 13, on the basis of the median value.[Results] FOXP3 + cells were distributed among the three defined tumor compartments with higher numbers of positive cells in the stroma. There were more FOXP3 + cells in the distant stroma when compared to FOXP3 + cells within the tumor and adjacent stroma. The correlation of itFOXP3 + cell with clinicopathological factors was analyzed. The number of itFOXP3 + cell was positively correlated with lymphovascular space invasion (LVSI) ($p = 0.018$). However, there was no correlation between itFOXP3 + cells and stage, histology, lymph node status and other pathologic data. In addition, the number of itFOXP3 + cells was not correlated with overall survival in univariate and multivariate analysis.[Conclusion] Although the number of itFOXP3 + cells correlated with lymphovascular space invasion, the number of FOXP3 + lymphocytes was not correlated with the prognosis of cervical cancer patients.

ISP-14-1 Treatment patterns and prognosis of stage I-II node positive cervical cancer

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[Objective] To assess treatment patterns and outcomes in patients with stage I-II node positive cervical cancer.[Methods] A retrospective study of patients with stage I-II node positive cervical cancer at a single institution between 1994 and 2012 was performed. Approval for the data acquisition was obtained from the institutional review board.[Results] We identified 263 patients. 163 patients underwent surgery and 100 patients were treated with definitive radiation therapy. 5-year overall survival rate was 64.8%. 3-year progression free survival rate was 58.7%. On multivariate analysis, initial treatment modality, non-SCC histology, positive para-aortic lymph nodes and non-chemotherapy were independent prognostic factors. Among the recurrent cases, non-SCC histology was an independent prognostic factor on multivariate analysis. Pelvic recurrence was a poor prognosis factor among the SCC recurrent cases, whereas distant recurrence was a poor prognostic factor among the non-SCC recurrent cases.[Conclusion]Non-SCC histology, positive para-aortic lymph nodes and non-chemotherapy groups were found to have poor prognosis. Multimodal therapy including chemotherapy may improve the survival of stage I-II node positive cervical cancer.

ISP-14-2 Outcomes of cold knife conization according to the margin involvement in high-grade lesions and microinvasive squamous cell carcinoma of the uterine cervix

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[Objective] To evaluate the long-term outcome of patients with cervical intraepithelial neoplasia (CIN 2-3), adenocarcinoma in situ (AIS), and microinvasive squamous cell carcinoma of the cervix (MICA) after cold knife conization (CKC).[Methods] We retrospectively reviewed data from 355 patients (median age 40 years old, range 21-68) with CIN 2-3, AIS, and MICA treated by CKC at a single institution. Clinico-pathologic variables, including age, parity, severity of the disease in cone specimens, number of quadrant involved, ecto- and endo-cervical margin involvement, were evaluated as possible predictors of residual disease.[Results] Among the 355 patients, 26 (7.3%) had residual disease demonstrated by colposcopic-directed biopsy and subsequent loop electrosurgical excision procedure (LEEP) or hysterectomy. In 244 patients (68.7%) the specimen was assessed as complete excision, and in 111 patients (31.3%) the excision was turn out to be incomplete. There were no significant differences in age, parity, and follow-up period between patients in whom excision was incomplete and those in whom complete excision was achieved. The patients who demonstrated positive margin was related to more severe disease of CKC specimens ($P<0.01$), glandular involvement ($P<0.01$), number of involved quadrants ($P<0.01$), and residual disease ($P<0.01$). Of 244 patients, 238 (97.5%) were found to have been cured of disease in the negative margin group. The cure rate for incomplete excision at the ectocervical margin was 91.5% ; incomplete excision at the endocervix was 76.7% and only 44.4% if excision was incomplete at both margins. In univariate analysis, severity of the disease in CKC specimens (20.4% [11/54] of patients with AIS and MICA vs. 5.0% [15/301] of patients with CIN 2-3, $P<0.01$) and positive resection margin (18.0% [20/111] vs. 2.5% [6/244], $P<0.01$) were significant risk factors for the residual disease. Multivariate analysis demonstrated that age (>50 years) ($P<0.01$), severity of the disease in CKC specimens ($P<0.01$), positive ecto- and endo-cervical resection margin ($P<0.01$) were significantly associated with higher risk of residual disease.[Conclusions] CKC performed for CIN2-3, AIS, and MICA is likely to be curative when the lesion is completely excised. Most cases of incompletely excised CIN 2-3, AIS, and MICA would also be curative, even in the positive ectocervical margin. Age (>50 years), severity of the disease in CKC specimens, positive ecto- and endo-cervical resection margin could be a significant risk factor for developing residual disease after CKC.