ISP-3-1 “Smartscope” as a new device to identify the precancerous diseases of the uterine cervix: a pilot study

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[Objective] Colposcopy is a definitive procedure to diagnose the precancerous diseases of the lower genital tract. However, the traditional colposcopy has some disadvantages of being large, heavy and expensive. The purpose of the study is to develop a cost-effective, simple yet reliable device similar to the currently available colposcopies. [Methods] The institutional review board of our institution approved the present study. We used iPhone 5S (Apple Inc. USA) as a new device to inspect the uterine cervix for 10 patients with abnormal cervical cytology, and named it Smartscopy. Dr. A inspected the cervix using Smartscopy, and Dr. B inspected the cervix using colposcopy for the same patient. Whether the maximal smartsopic abnormality correlates to the maximal colposcopic abnormality was evaluated. The site of biopsy was determined on the basis of the colposcopic findings. [Results] Although the concordance between the maximal smartsopic and colposcopic abnormality was confirmed in seven of the 10 patients (70%), all cervical intraepithelial neoplasia (CIN) lesions were detectable by Smartscopy. Smartscopy can reveal the cervix as clearly as colposcopy, especially in acetowhite epithelium. [Conclusion] The pilot study showed the high sensitivity of Smartscopy to diagnose CIN. In terms of the cost and the size, Smartscopy may be utilized in countries with low medical resources.

ISP-3-2 Possibility of less radical treatment for patients with early invasive uterine cervical cancer

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[Objective] Radical trachelectomy (RT) with lymphadenectomy has become a standard treatment modality for patients with early invasive uterine cervical cancer who hope for preservation of their fertility. However, pregnancy after RT has high risks of preterm birth. We studied the possibility of more conservative RT and the application of RT for patients with higher clinical stages. [Methods] Medical charts and operative specimens of 42 patients with RT and 64 patients with radical hysterelectomy (RH) were studied retrospectively. Tumor size, the distance between the margin of the cancer and the internal Os, parametrial invasion, lymph node metastasis, and their obstetrical and oncological prognoses were investigated. [Results] The average distances were 37, 29, 18.7, and 14 mm for patients with stage 1A2, 1B1 (<2cm), 1B2 (>2cm), and 1B2, respectively. When amputation was done 10 mm below the internal OS, all 10 patients with 1A2, 57 of the 58 patients with 1B1 (<2cm), 19 of the 33 patients with 1B1 (>2cm), and 1 of the 5 patients with 1B2, had a cancer-free margin >10 mm. Furthermore, patients with stage 1A2 had a cancerfree margin 10 mm even if we amputated the cervix 20 mm below the internal OS. Parametral invasion was detected in 2 cases of stage 1B1. [Conclusion] Simple trachelectomy 20 mm below the internal Os might be possible for stage 1A2. The present method would be the best for stage 1B1 (<2cm).