Objective: To compare the clinical efficacy of CoolingCut cold knife conization and traditional cold Knife conization in the treatment of cervical high grade lesions?
Methods: The clinical data of 150 patients with cervical high grade lesions underwent CoolingCut cold knife conization (CoolingCut-CKC group) and 152 underwent traditional cold Knife conization (Traditional-CKC group) in Peking University People's Hospital from Jun 1st 2017 to Jun 1st 2018 were collected? The patients' age, mean operative time, preoperative pathological grading, blood loss during the operation, positive resected margin and recurrence were compared between the two groups?
Results: There was no difference on the patients' age and preoperative pathological grading between the two groups ($P > 0.05$)? The mean blood loss during the operation (6.14±5.38 ml) of CoolingCut-CKC group was significantly different from those of Traditional-CKC group (25.22±63.66 ml) ($P > 0.05$)? There was no statistical difference on the mean operation time, rate of positive resected margin and recurrence rate between Coolingcut-CKC group and Traditional-CKC group (23.33±9.44 min vs 29.93±11.78 min, 12.67% vs 11.18%, 0 case vs 0 case, respectively) ($P > 0.05$)?
Conclusions: Both Coolingcut and traditional CKC are safe as well as effective in the treatment of high-grade cervical lesions?Compared with traditional CKC, Coolingcut CKC has the advantage of less intraoperative blood loss?

Could Multiple Direct Punch Biopsies Along With VIA and VILI Replace Colposcopy in Low Resource Settings

Heba Mahdy[1] and Monira Gad[2]. [1]Royal College of Physicians of Ireland, [2]Al-Azhar university

Objective: This study aims to answer the hypothetical question "Could replace colposcopy with multiple direct punch biopsies along with visual inspection with acetic acid (VIA) and VILI (visual inspection with Lugol's iodine), to improve the detection of CIN (cervical intraepithelial neoplasia) in women, in settings with constrained health systems?"
Methods: This is a cross-sectional study recruited 439 women aged between 23 and 62 years old, selected from patients attending our outpatient clinic at Alzahraa hospital, Cairo, Egypt. Exclusion criteria include all women under 23-year-old, virgin, pregnant, menstruating women, and women with cancer at the time of the enrollment to the study.
Results: The results showed that most of the LGSIL lesions are in the lower margin of the cervix, mostly in the lower right quadrant, and most of HGSIL was on the right side of the cervix, mainly in the right upper quadrant. Therefore, more research is needed to evaluate these findings. The mean age in positive cases was 43, while the mean Parity was four, which reflects the role of age and high parity as a risk factor for cervical cancer development.
Conclusions: The authors suggested that it is necessary to do VIA and VILI to all women aiming to detect cervical pre-cancerous lesions. In order to reduce the false-negative results, all aceto-white areas must be biopsied, and multiple punch biopsies must be taken as it is more accurate in diagnosing CIN lesions. More training is required on the punch biopsy sampling technique. The authors are currently designing national Egyptian guidelines for cervical cancer screening.

Efficacy of Modified Photodynamic Therapy for Cervical and Vaginal HSIL Compared with Cryotherapy: A Cohort Study

Yanjie Wang[1], Li Geng[1], Hongyan Guo[1], and Xinwei Gao[1]. [1]Peking University Third Hospital

Objective: To evaluate the response and efficacy of modified photodynamic therapy (PDT) compared with cryotherapy in patients with therapy for cervical and vaginal HSIL (including cervical intraepithelial neoplasia CIN2 and vaginal intraepithelial neoplasia 2 and 3).
Methods: Medical records were collected from patients diagnosed with CIN2 or VaIN2/3 between December 2018 and April 2019. They chose PDT or cryotherapy voluntarily. In patients received modified PDT, 20% 5-ALA were applied as topical photosensitizer, incubated for 3 hours and then the lesion received 635nm laser with a light dose of 100J/cm^2. Patients received 3 times of PDT treatment at 1-week-interval. Cryotherapy were applied to the lesions for 2 thaw-freeze cycles, using CO_2. TCT and HPV were collected 6 months later. If both negative, they were regarded as cured. Had any of TCT and HPV abnormal, patients were referred to colposcopy, and biopsies LSIL or negative were regarded as cured.
Results: 26 patients received modified PDT and 21 received cryotherapy, with cure rates of 80.7% (21/26) and 71.4% (15/21), respectively. Overall, PDT was 1.3 times more effective than cryotherapy, with a crude HR value of 2.3 (95% CI 0.5-10.3) and 5.0 (95% CI, 0.3-98.1) when covariates such as age, immunosuppression status, smoking, and large lesion area were adjusted. For women older than 35 years of age, the cure rate is 60% lower than that of younger patients; if the patient is combined with immunosuppressive state, the curative effect is reduced by 40%; for non-HPV16 type infections, the curative effect is 100% higher than that of the 16-type infected population.
Conclusions: Modified PDT may be an effective treatment for cervical and vaginal HSIL.

Evaluation of Folate Receptor-Mediated Detection as a Diagnostic Tool for Cervical Intraepithelial Neoplasia 2+

David Moos[1] and Donghong Li[2]. [1]GY-Biotech, [2]Guangren Hospital

Objective: FRD ® (Folate Receptor-mediated Detection) has been proposed as a reliable method to screen cervical intraepithelial neoplasia 2+ (CIN2, CIN3, and cervical cancer). This study investigates the clinical significance of FRD ® by comparing the accuracy of FRD ® with that of HPV Testing and Thinprep Cytology (TCT).
Methods: From March 2019 to April 2019, 81 patients in the gynecology clinic of the Second Hospital of Jilin University received screening with FRD ®, TCT, and HPV examinations upon visiting the clinic. If any of the three tests provided a positive result, colposcopy was performed with biopsy being the gold standard for pathological diagnosis.
Results: The sensitivity of FRD ®, TCT, and HPV in the diagnosis of cervical intraepithelial neoplasia 2+ (CIN2, CIN3, Cervical Cancer) were 72.22%, 72.22%, and 83.33% respectively. The specificity of FRD ®, TCT, and HPV in detection of CIN2+ was 65.07%, 60.31%, and 25.39% respectively. The accuracy of FRD ®, TCT, and HPV in diagnosis of CIN2+ was 66.67%, 62.96% and 38.27%. The positive predictive value (PPV) of FRD ®, TCT, and HPV in diagnosis of CIN2+ was 37.14%, 34.21% and 38.27% respectively, while the negative predictive value (NPV) was 89.13%, 88.37% and 84.21% respectively.
Conclusions: FRD ® provided high values of sensitivity, specificity and accuracy. FRD ® has advantages in detection speed (< 60 seconds), economic cost, and patient compliance. FRD ® can be an effective and advantageous tool for the primary screening of cervical intraepithelial neoplasia 2+ (CIN2, CIN3, Cervical Cancer), especially in regions with hard-to-reach patients. FRD ® could also provide significant value as a co-test with HPV Testing.

Healthcare Resource Utilization After Cervical Conization: 2-Year Follow-Up from a Large United States Claims Database

Vimalanand Prabhu[1], Baanie Sawhney[2], Zhiwen Liu[1], Ashmita Bandopadhyay[2], Smita Kothari[1], Alfred Saah[1], Gonzalo Perez[1], Evan Myers[3], and Elmar Joura[4]. [1]Merck & Co., Inc, [2]CHEORS, [3]Duke University Medical Center, [4]Medical University of Vienna

Objective: Human papillomavirus (HPV) infection of the cervix can lead to the development of cervical intraepithelial neoplasia 2/3 (CIN2/3), and eventually cervical cancer; HPV can be prevented though nonavalent HPV (9vHPV)vaccination. Screen-detected CIN2/3 can be treated by cervical conization, but patients undergoing conization often experience recurrence within 2 years. Our objective was to estimate the post-conization healthcare resource utilization (HCRU) to inform estimates of the overall burden of CIN2/3.
Methods: We conducted a retrospective cohort study using the Truven MarketScan® database, a large healthcare claims database in the US. Females between the age 18-45 at the time of first conization procedure between 2012 and 2015 were identified using CPT codes for conization (57522, 57520)/ ICD-9/10-PCS (ICD-9 67.2, ICD-10 0UBC7ZZ). We then estimated HCRU including frequency of tests, procedures, and diagnoses commonly associated with cervical HPV (Pap test, HPV test, colposcopy, biopsy, conization, hysterectomy, CIN2/3, etc.) during the follow-up period.
Results: Of 15,817 patients meeting inclusion criteria, about 85% of women had at least one Pap test between 7-24 months post-conization. 50% women had at least one HPV test in 7-24 months after conization, with 9% women having a visit for HPV infection. About 15% women had at least one visit for CIN3 in the 7-24 month follow-up period. Colposcopy and ECC were the most common procedures. 3% had a second conization within 6 months.