CLINICAL EVALUATION OF MOLECULAR MARKERS IN THE DETECTION OF PRENEOPLASTIC LESIONS OF THE CERVIX IN WOMEN ATTENDING COLPOSCOPY.

Melisa Castañeda [1], Arianis Tatiana Ramírez [1], Carolina López [2], Phil Castle [3,] Gloria I Sánchez [1].

[1] Infection and Cancer Group, Universidad de Antioquia, Medellín, Colombia [2] Department of Pathology-School of Medicine, Universidad de Antioquia, Medellín, Colombia [3] Department of Epidemiology and Population Health, Albert Einstein College of Medicine, Bronx, New York.

E-mail: k_mels@hotmail.com

Introduction: The HPV test has high sensitivity but low specificity to detect high-grade cervical intraepithelial neoplasia (CIN2+). Cell cycle deregulation and transformation of the cervical epithelium by HPV leads to aberrant E6 and E7 oncoproteins expression, and concomitant induction of the p16INK4a tumor suppressor gene and Ki67 cell proliferation marker. ***Methodology***: These markers are evaluated in women attending colposcopy services because abnormal cytology and/or HPV+. Prior to colposcopy, one cervical sample was obtained using a Cervex broom and placed in a 20-ml vial of PreservCyt transport medium. An aliquot of 1mL was removed for HR-HPV testing and 16/18 typing using HPV COBAS test®, and remaining sample was used for p16/Ki-67 cytology processed using CINtec®PLUS. Percentages of positive tests according to the histopathological diagnosis were estimated. ***Results.*** Of the 954 women recruited, 528 (55.3%) had no lesions, 208 (21.8%) had CIN1, 68 (7.1%) CIN2, 28 (2.9%) CIN3, 7 (0.7 %) Cervical cancer or Adenocarcinoma, not biopsy was taken in 21 (2.2%) and 94 (9.9%) have not histological result yet. There are paired results for pathology and laboratory tests in 627 women, 57% (356) were HR-HPV+, the positivity in women with CIN1, CIN2, CIN3 or cervical cancer was 69%, 87%, 90% and 100%, respectively. 129 (21%) were positive for HPV16/18, and the positivity in women with CIN1, CIN2, CIN3, and cervical cancer were 25%, 60%, 60% and 50% respectively. 133 women (21%) were positive for p16/Ki6, the positivity in women with CIN1, CIN2, CIN3 and cervical cancer was 29%, 36%, 80% and 100% respectively. ***Conclusion:*** The percentage of positivity for HPV16/18 and p16/ki67 was lower in women with low-grade or negative lesions and increased as the severity of the histopathological diagnosis increased, suggesting that these tests could be more specific for classification of HPV+ women.