

ULTRASTRUCTURE OF CERVICAL INTRAEPITHELIAL NEOPLASIA TYPE 3 (CIN3) WITH HUMAN PAPILLOMAVIRUS (HVP) INFECTION.

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The cervical intraepithelial neoplasia (CIN) is a type of precursor lesion to squamous cell carcinoma of cervix. Frequently these lesions show cytological changes suggestive of HPV infection^{1 2}. These viruses can infect the anogenital tract; some cutaneous HPVs such as type 2 can infect mucosa epithelium and HPV 16, which is found in association with invasive squamous cell carcinomas^{2 3}. Based on their associations with specific types of lesion, the high oncogenic risk HPVs are type 16, 18, 45 and 56.

Methods: Cervical biopsies were obtained of thirteen patients with diagnosis of CIN 3 admitted to the consult of cervix pathology Maria Teresa Toro at Aragua, Venezuela. The viral DNA was detected by polymerase chain reaction (PCR) and biopsies were processed with routine techniques for transmission electron microscopy.

Results: HPV DNA was detected IN 30,7% of CIN 3, in 38,4% it wasn't and 30,7% was insufficient matter. The CIN 3 positive HPV DNA showed nuclear enlargement, nuclear hiperchromaticity and capillaries with lysosome. The CIN 3 negative HVP DNA showed pynocytotic vesicles, abnormal mitochondria, lipofuscin granules, capillaries with macrophages, myelin-like figures, all this has been reported in reparative processes.

Conclusions: This study showed that positive VPH DNA cervical intraepithelial neoplasia exhibited changes suggestive of nuclear atypia. These alterations were not found in VPH DNA negative. The negative VPH DNA cervical intraepithelial neoplasia sample showed reparative processes, it is possible that these lesions are benign and this suggests an individual treatment.

Keywords: Cervical Intraepithelial Neoplasia. Papillomavirus. Reparative processes. Ultrastructure

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References

- [1] R.J, Kurman. Blaustein's Pathology of the Female Genital Trac. (1995) 229,230
- [2] C, Infantolino, et al., Obstet Gynecol Reprod Biol. (2000) Nov 931.71-5
- [3] C, Jimenez, et al., J.Oral Pathol Med (2001) 30:385-8
- [4] N, Ayala. Red de Sociedades Científicas Venezolana (2002) Abstract.
- [5] M, Correnti. Rev. Venezolana de Oncología (1997) Vol 9 Abril-Junio. N-2
- [6] l, Harvey, et al., Molcular Cell Bilology 4 ed. 1055
- [7] A.M, Puig. Rev Española de Patología (2001) Vol.34 #4 311-315

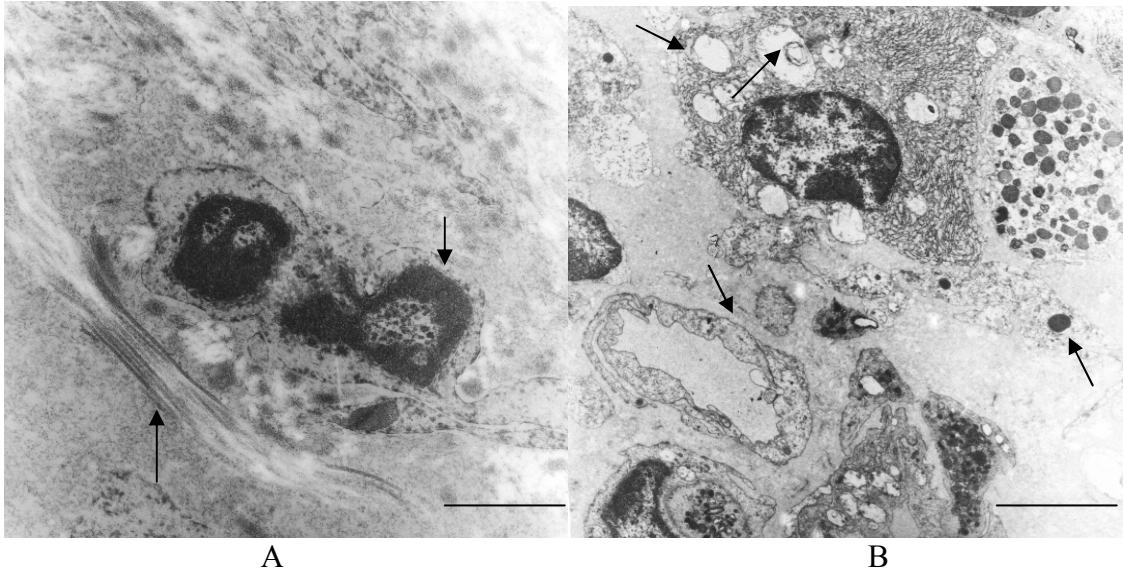


Figure A . Bars 0,1 μm . Abnorma cell nucleus, nuclear enlargement, nuclera hiperchromaticity. Collagen fibers.

Figure B. Bars 0,5 μm . Abnormal capillarie, abnormal mitochondria, lipofuscine granules, myelin-like figures.