Symposium no. 12

Papillomaviruses and Human Cancer

12.001

PECULIARITIES IN THE EPIDEMIOLOGY OF CERVICAL CARCINOMA IN SUBSAHARIAN AFRICA PARTICULARLY IN SOMALIA

Baraho' D.A., Giovagnoli M.R.
Dip. Med. Sperimentale I Universita'- Roma

Three fourths of the invasive forms of cervical carcinoma are observed in women who live in underdevelopped countries. Very little is known on the exact incidence of this type of neoplasia, its evolution and the risk factors correlated with the disease in these countries. Social and economic variables associated with invasive pathology have been examined through cytologic screening for cervical cancer in a group of 700 Somalian women. The social-economic variables of patients with cervical cancer (mean age, relatively young, illiterates, high parity, rural origin) are in accordance with what has been reported by other authors for women of the subsaharian area with the same pathology, and were clearly different from those of patients with viral infections.

12.002

TOPICAL BCG TREATMENT OF CARCINOMA IN SITU OF THE CERVIX, ASSOCIATED WITH HPV.

G. CHAKALOVA, L. MARINOVA, G. GANTCHEV

IN 6 OF 13 CASES WITH CIS BEFORE THE TOPICAL BCG APPLICATION IMMUNOHISTOCHEMICALLY BY MoAb WAS FOUND HPV, AND IN NO ONE CASE AFTER THAT. IN 6 CASES AFTER TREATMENT WE HAVE NOT FOUND CIS OR DYSPLASIA OF THE CERVIX. IMMUNOHISTOCHEMICALLY BY MoAb WE ESTABLISHED THAT THE EXPRESSION OF CLASS II ANTIGENS WERE ENHANCED IN THE LANGERCHANCE CELLS AS WELL AS IN THE STROMAL REACTION. THESE RESULTS SUGGEST THAT TOPICAL BCG TREATMENT HAS A STIMULATION OF CLASS II EXPRESSION, AND A GOOD EFFECT IN CASES OF CIS, ASSOTIATED WITH HPV.

12.003

HUMAN PAPILLOMA VIRUS (HPV) INFECTION AND CARCINOMA OF THE OESOPHAGUS IN PORTUGAL: assessment of citopathogenetic pattern and in situ hybridization (*).

P. Fidalgo, P. Gameiro, P. Chaves, C. Lopes, P. Borralho, C. Nobre Leitão, F. Costa Mira. Gastrenterologia, Serv. Anatomia Patológica e Lab. Virologia. Instituto Português Oncologia Francisco Gentil, Lisboa, Portugal.

The aim of our study was to assess HPV infection in patients with oesophagical cancer using in situ hybridization and evaluating citopathogenetic pattern. Correlation with alcohol and smoking habits was studied. Sixteen consecutive patients with oesophagical squamous cell carcinoma submited to surgery were included. Presence of koilocytosis, binucleation, hyperacanthosis and capillary loops were considered cytopathogenetic viral effects. In situ hybridization was done using biotynilated probes for HPV 6-11, 16-18 and 31-33-35. Tissue from tumor (T) and adjacent normal mucosa (ANM) was studied. Cytopathogenetics effects were seen in: T: 31.2%; ANM 62.5%. In Situ hybridization results were the following:

n=16 (%)	HPV 6-11	HPV 16-18	HPV 31-33-35	Global
T	56.2 6.2	18.7	—	62.5
ANM	31.2 6.2	25	50	—

Conclusions:1) HPV infection was detected in more than 50% of patients with oesophagical cancer; 2) No correlation was found with alcohol or smoking habits. (*) Supported by Liga Portuguesa Contra o Cancro, Lisboa.

12.004

Phosphoinositide metabolism in a BK virus transformed pancreatic cell line.

A. Gjøver, D. Malm, H. Haukland, A. Bertinussen, B. Vonen and J. Florholmen.

We have characterized the phosphoinositide (PI) metabolism in a polyoma BK virus transformed rat pancreatic cell line which grows in soft agar, has highly malignant characteristics, expresses T antigen and contains trace amounts of insulin. The hydrolysis of PI was expressed as the accumulation of ^{3}H-labeled inositol metabolites after analysis on an anion-exchange fast-protein liquid chromatography (FPLC). An apparent autonomic hydrolysis of PI was observed where potential stimulatory agents as glucose (16 Mm), carbachol (0.5 Mm) with and without 10 Mm LiCl, cholecystokinin (10^{-6}) and potassium (40 Mm) was without effect. Furthermore, no inhibitory effect was observed in a Ca^{2+}-free/EDTA containing solution. We conclude that transforming pancreatic islet cells by polyoma BK virus there is a substantial change in the regulation of the PI hydrolysis which apparently represents an oncogen expression.

12.005

HPV 16 IN THE ILL WOMEN WITH UTERINE CERVICAL CANCER

Goździcka-Józefiak A.*, Kędzia H., Tomczak E.
Department of Biopolymer Biochemistry A.Mickiewicz University Poznań,*
Department Histopathology Inst.of Gynecol.Obstet.,60-535 Poznań, Poland

Uptill now it has been known that HPV-s are strictly epitheliotropic and one can see them in infected cervical epithelium, CIN, and in squamos cell cancer. However, our studies have shown the presence of PV 16 in blood cells of women with cervical cancer.

We collected the cancer tissue and blood cells from 24 ill women. Majority of cervical cancer were advanced (II,III°,) and 3-Ca in situ.

The blood cells were collected by centrifugation. Lymphocytes were isolated by centrifugation in ficol-urcplin gradient.

Out of the 24 women with cervical cancer in 83% cases we have found PV 16 in cancer tissue and in 70% in blood cells: in granulocytes and lymphocytes DNA.

Moreover, we have cultured lymphocytes from women with advanced cervical cancer, and we have registered two interesting phenomena:

1. Decrease lymphocytes proliferative responce to mitogens compa red with control.
2. In lymphocytes DNA we detected HPV 16.

On the bases of our results we conclude that granulocytes may frame some kind of PV reservoir in the blood whereas in lymphocytes PV attach to membrane only, and do not enter into the cell. The presence of PV 16 in the blood of women with advanced cervical cancer decreases immunocompetency of them.

Recently we have been studing the presence of PV 16 in the blood cells of women after hysterectomy, and in a few cases we were able to detect PV 16.

12.006

ANTIGENICITY OF THE L1 PROTEIN OF HPV-16 (HPV-16) EXPRESSED IN BACULOVIRUS.

Kambo, P.K., Jewers, R.J., Best, J.M. & Cason J. St Thomas' Hospital, London, U.K..

HPV-16 is associated with malignant lesions of the cervix. Due to difficulties in obtaining native antigens, their is no serological test for infection with this virus. We have expressed an L1 protein of HPV-16 in baculovirus for use as an antigen. The L1 protein was not phosphorylated nor glycosylsated (O- or N- linked) an no virus-like particles were detected. Only very low levels of antibodies to affinity-purified L1-HPV-16 were found in sera from 50% (25/50) patients with cervical intraepithelial neoplasia and in 8% (4/47) of adult controls in ELISAs.