

dopaminergic pathways in the central nervous system are of importance for male sexual behavior and penile erection. Lesser is known about Cabergoline and priapism with only one case report in the literature (1).

Clinical Case: A 65 yr old African American male with a past medical history significant for obesity, essential hypertension, and recent history of frontal headaches was found to have a pituitary macroadenoma. Brain MRI demonstrated 11 x 12 x 9 mm enhancing lesion within the right lateral sella turcica. The lesion extended laterally to abut the right cavernous ICA without vascular encasement or extension into the right temporal skull base. Prolactin level was 276.3 ng/mL (2.1-15.0 ng/mL). He was started on Cabergoline 0.5 mg weekly. 60 days after starting Cabergoline he presented to the ED with a painful penile erection lasting >12 hours. He did not take any Phosphodiesterase (PDE) inhibitors and had no other recent change in medications. He denied any history of sickle cell disease. His most recent dose of Cabergoline was the day prior to the ED visit. He was seen by a Urologist in the ED and confirmed to have a low flow Priapism and underwent aspiration of intracorporal bodies. He was discharged home on pseudoephedrine and pain medications. Cabergoline was discontinued. He has had no further episodes of Priapism since discontinuation of Cabergoline.

Conclusion: The time between drug use and occurrence, absence of other offending medications or precipitating factors and no further priapism episodes once treatment was discontinued suggests a priapism as a rarely reported side effect of Cabergoline. (1)

References:

1.E.de la Pena Zarzuelo, V. Hernandez Canas and C. Llorente Abarca, Department of Urology, Hospital Universitario Fundacion Alcorcon, Madrid, Spain

Genetics and Development (including Gene Regulation)

ENDOCRINE DISRUPTING CHEMICALS

The Regulation of Tumor Suppressor Genes P53, BRCA-2, and Cell Cycle Protein p21 by Bisphenol S (BPS) in MCF-7 and T47-D Breast Cancer Cells

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Bisphenol A (BPA) is considered to be an endocrine disrupting chemical (EDC), which mimics endogenous hormones and is linked to various cancers. Bisphenol S (BPS) is a BPA analogue, often used in plastics. BPS can leach into food and drink products, exposing humans to these chemicals. Evidence suggests BPS is also an EDC with similar endocrine disrupting effects. Despite hopes for a safer alternative, research has shown BPS possesses estrogenic activity due to its structural similarities with its analogue BPA. Previously we have shown the effects of BPS on estrogen receptor-alpha (ER α) and BRCA-1 in both MCF-7 and T-47D breast cancer cells. The wild-type p53 and BRCA-2 work to prevent cancer by monitoring and repairing DNA damage; however, in breast cancer

patients these genes are often mutated. Mutated p53 will induce the cell cycle protein p21 to act as an oncogenic transcription factor. In the present study, we have examined the effects of BPS, alone and in combination with hormones and anti-hormones, on p53, BRCA-2, and p21 in both MCF-7 and T-47D cell lines by utilizing western blot analyses, cellular viability assays, confocal microscopy, apoptosis assay, and RT-qPCR analyses. Western blot studies revealed alterations in the expression of p53, BRCA-2, and p21 related with varying concentrations of BPS (4-20 μ M). In comparison to the control, p53 expression increased (65-95%) in the presence of BPS in both MCF-7 and T-47D cells. In addition, BRCA-2 expression revealed a similar increase in both cell lines when treated with BPS. However, p21 expression decreased (approximately 50%) with increasing concentrations in both cell lines. For further evaluation, an optimal concentration of 8 μ M BPS was then used in combination with various hormones and anti-hormones. Compared to the control, BPS and E₂ were up regulated in a similar fashion to p53. A similar trend in the effects on BRCA-2 expression was depicted in T-47D and MCF-7 cells. However, in p21, BPS and E₂ were down regulated in both MCF-7 and T-47D breast cancer cells. In order to determine the influence of BPS on the growth of breast cancer cells, image cytometric analysis with propidium iodide staining was utilized to quantify alterations in T-47D and MCF-7 cell numbers and viability. Upon treatment of BPS concentrations (4-20 μ M), an increase in cellular proliferation (12-60% increase) occurred in both cell lines. These cellular proliferative effects of BPS and E₂ were sensitive to combination treatments with anti-estrogens. Confocal microscopy was utilized to examine the cytolocalization of p53 upon exposure to BPS alone and in combination with hormones and anti-hormones. The results from this study will yield a greater understanding of the molecular regulation of BPS action via the p53, BRCA-2, and p21 signaling pathways linked with breast cancer.

Tumor Biology

ENDOCRINE NEOPLASIA CASE REPORTS II

Behind the Mask: The Stories of Insulinoma- a Case Series.

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Behind the mask: The Stories of Insulinoma- A case series
Introduction: Insulinoma is a rare, slow growing pancreatic neuroendocrine tumor, leading to hyperinsulinemic hypoglycemia. It runs a very insidious course often masquerading as neurologic, psychological or cardiac disease. We present a series of four cases with varying clinical presentations, diagnoses and latency to diagnosis.