

slides, 19/21 cases (90.5%) showed a distinctive morphology composed predominantly of glands, nests, and cords with atrophic cytoplasm, hyperchromatic nuclei, and visible nucleoli. Needle biopsy cases ranged from Gleason patterns 3 to 5 with tumor identified on one or more cores, ranging from a minute focus to 80% of the core. In all 8 radical prostatectomies p63 positive cancer was present, with in 2/8 cases both p63 positive cancer and usual p63 negative acinar prostate cancer. In all 8 cases, the tumors were organ confined with negative margins and there was no seminal vesicle involvement or lymph node metastasis. The presence of p63 positive atypical glands with an infiltrative pattern and perineural invasion on radical prostatectomy confirmed the needle biopsy diagnosis of carcinoma. Rarely, prostate cancer can aberrantly express diffuse p63 staining in a nonbasal cell distribution leading to the erroneous diagnosis of atrophy or atypical basal cell proliferation. The diagnosis of prostate cancer is based on the morphology and confirmed by the absence of high molecular weight cytokeratin staining and positivity for alpha-methylacyl-CoA racemase in the atypical glands. Pathologists need to be aware of this rare and unusual phenomenon, which is a potential pitfall in prostate cancer diagnosis.

Editorial Comment

Pathologists use immunohistochemistry for the differential diagnosis between adenocarcinoma of the prostate and benign mimickers in difficult cases. The aim is to detect basal cells which excludes adenocarcinoma (1). The most frequently used markers for basal cells is clone 34 β E12 (a pool of high-molecular-cytokeratins 1,5,10,11 and 14) and p63. 34 β E12 stains the cytoplasm and p63 stains the nucleus of basal cells.

The cases of adenocarcinoma with aberrant expression of p63 studied by Osunkoya et al. is a very important finding. Pathologists need to be aware of this rare and unusual phenomenon, which is a potential pitfall in prostate cancer diagnosis.

Reference

1. O'Malley FP, Grignon DJ, Shum DT: Usefulness of immunoperoxidase staining with high-molecular-weight cytokeratin in the differential diagnosis of small-acinar lesions of the prostate gland. *Virchows Arch A Pathol Anat Histopathol.* 1990; 417: 191-6.

Dr. Athanase Billis

Full-Professor of Pathology

State University of Campinas, Unicamp

Campinas, São Paulo, Brazil

E-mail: athanase@fcm.unicamp.br

INVESTIGATIVE UROLOGY

Visualization of the neurovascular bundles and major pelvic ganglion with fluorescent tracers after penile injection in the rat

Davila HH, Mamcarz M, Nadelhaft I, Salup R, Lockhart J, Carrion RE

Department of Interdisciplinary Oncology at Moffitt Cancer Center, Division of Urology, University of South Florida, College of Medicine, Tampa, FL 33612, USA

BJU Int. 2008; 101: 1048-51

Objective: To evaluate whether fluorescent tracers can consistently label the neurovascular bundles (NVBs) and major pelvic ganglion (MPG) after an intracavernosal penile injection, as the reported incidence of

erectile dysfunction (ED) in men after radical prostatectomy (RP) is 55-65% and thus preservation of erectile function, sparing one or both of the NVBs remains one of the most vital factors.

Materials And Methods: Male Sprague-Dawley rats (3 months old) received penile injections (20 microL; seven rats/group) of either deionized water (DW), Fluoro-Gold (FG), Fast-Blue (FB), Fluoro-Ruby (FR) or green fluorescent pseudorabies virus (GF-PRv). The rats were killed at 2, 3 and 14 days after injection and the NVBs and MPG were harvested and placed directly under fluorescence light. Image analysis was done by computer, coupled to a microscope equipped with a digital camera. Each NVB and MPG were analysed for its staining pattern and consistency.

Results: When compared with the FB, FR and GF-PRv rats, the FG-injected rats had better staining of the NVB at 2, 3 and 14 days after injection. Under x200, FG highlighted the axons of the cavernous nerve (CN) and cell bodies (MPG). This indicates that FG injection into the penis induced the strongest CN labelling (positive staining) at 2 and 3 days after injection as compared with FB-, FR- and GF-PRv-injected rats.

Conclusion: FG injection into the penis has consistent retrograde staining of the NVBs and MPG after 3 days. Therefore, we predict that FG could potentially be used to improve the identification of the NVB in other models. However, further studies need to be carried out before these tracers can be used in humans.

Editorial Comment

This is an interesting and promising study where the authors aimed to evaluate whether various tracer substances can consistently label the neurovascular bundles and the major pelvic ganglion after intracavernosal penile injection using the rat as an animal model. The results indicated that injection of fluoro-gold (FG) at the penis induces cell body labeling of neurons at the major pelvic ganglion at 2 and 3 days after the injection. Under fluorescent light, the penile injection of FG before pelvic surgery might help to identify the neurovascular bundles, and therefore, preserve potency after radical prostatectomy, for instances. We hope that it could be transposed to clinical setting soon.

Dr. Francisco J. B. Sampaio

Full-Professor and Chair, Urogenital Research Unit

State University of Rio de Janeiro

Rio de Janeiro, RJ, Brazil

E-mail: sampaio@urogenitalresearch.org

Oestrogen receptors and their relation to neural receptive tissue of the labia minora

Martin-Alguacil N, Pfaff DW, Kow LM, Schober JM

Department of Neurobiology and Behaviour, The Rockefeller University, New York, NY, USA

BJU Int. 2008; 101: 1401-6

Objective: To assess the cellular distributions of oestrogen receptors alpha and beta (ER alpha and ER beta) and neuronal nitric oxide synthase (nNOS) in the labia minora, as knowledge about ER type and function may clarify the role of oestrogens in vaginal scar formation and improve outcomes in female genital surgery.

Subjects and Methods: Labial samples were taken from 10 girls (aged 2-9 years) who underwent surgery for labial fusion. The waste tissue strips obtained were used for immunohistochemical identification of ER alpha and ER beta, and nNOS in the labia minora.

Results: There was ER alpha nuclear staining in the stroma of the labia minora close to the clitoris, and basal and suprabasal in the epidermal cells membrane restricted to superficial sections of the labia minora. ER beta was found in the stroma of the labia minora closer to the clitoris and in superficial sections, in the basal epider-

mal cells membrane and apocrine glandular epithelial cells membrane. There was also ER beta cell membrane staining in the basal and suprabasal epithelial cells and fibroblasts in the lamina propria.

Conclusions: Established ER presence allows the consideration of the introitus of the vagina as a target for oestrogen therapy in various clinical and surgical situations. Continuing elucidation of the immunohistochemistry of this external genital tissue might assist in the development of molecular tools to treat genital abnormalities. Details of this immunohistochemistry may also advance the understanding of the effects of sexual differentiation on the brain and other organ systems.

Editorial Comment

These interesting findings confirm our believe that labia minora and other vulvar tissues are estrogen target structures. It is our practice to administer local estrogen for treating labia minora fusion and other vulvar diseases in pre-pubertal, pre-menopausal and post-menopausal women. Also, the present data enable us to expect a greater estrogen effect when administered vaginally, compared with extravaginal administration, as the authors stated. These findings are of clinical importance in the pathophysiology of age-associated and hormonally associated female genital disorders that include both functional and structural changes.

Dr. Francisco J.B. Sampaio

*Full-Professor and Chair, Urogenital Research Unit
State University of Rio de Janeiro
Rio de Janeiro, RJ, Brazil
E-mail: sampaio@urogenitalresearch.org*

RECONSTRUCTIVE UROLOGY

Open surgical repair of ureteral strictures and fistulas following radical cystectomy and urinary diversion

Msezane L, Reynolds WS, Mhapsekar R, Gerber G, Steinberg G
Chicago, Pritzker School of Medicine, Chicago, Illinois
J Urol. 2008; 179: 1428-31

Purpose: Open surgery after cystectomy can be a challenge. We report the incidence of postoperative urinary diversion-enteric fistula and ureteral strictures in patients undergoing radical cystectomy, and discuss the diagnosis and management of these complications, including our surgical approach to these patients.

Materials and Methods: We preformed a retrospective review of 553 patients undergoing radical cystectomy and urinary diversion for bladder cancer between April 1999 and January 2007. Patients in whom a ureteral stricture or fistula developed were identified by serial laboratory and imaging evaluations. A chart review was preformed to identify symptoms, time to stricture or fistula development, radiological findings, type of diversion, estimated blood loss and whether the original anastomosis was stented. Management and outcomes were assessed.

Results: Of 553 patients reviewed ureteral stricture developed in 41 (7.4%) with a mean followup of 20.2 months (range 1 to 98). Strictures developed in 11% (31 of 272) of the orthotopic ileal neobladder, 2.5% (6 of 236) of ileal conduit and 8% (4 of 45) of Indiana pouch cases. Open repair led to an overall success rate of 87%. Urinary diversion-enteric fistula developed in 12 (2.2%) of the 553 patients with a mean followup of 28.4 months (range 3 to 94), all of whom had undergone orthotopic neobladder diversion. No patient had recurrence after surgical repair of the fistula.