

Conclusion: These experiments show physiological variability around the circumference of the human male bladder neck. The posterior bladder neck shows significantly stronger contraction to alpha-adrenergic agonists compared with cholinergic agonists; the anterior bladder neck does not have a similarly significant differential response. The uniform response to noradrenaline may underlie the bladder neck's role in the prevention of retrograde ejaculation. The differential responses to carbachol may reflect differences in the embryological derivation of the anterior and posterior bladder neck fibres or in their innervation. Some of these differences may have clinical importance through the action of therapeutic agents.

Editorial Comment

The authors of this elegant *in vitro* study show by the first time, in the best of my knowledge, that exist important physiological variability in the human male bladder neck. They found that the posterior bladder neck presented significantly stronger contraction to alpha-adrenergic agonists when compared with cholinergic agonists. On the other hand, the anterior bladder neck did not have a similarly significant differential response. The authors also found a uniform response to noradrenaline and this might underlie the role of bladder neck in avoiding retrograde ejaculation. Also, the authors speculated that differential responses to carbachol may reflect differences in the embryological origin of anterior and posterior bladder neck fibers or in their innervation.

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

A new suture material for hypospadias surgery: a comparative study

Guarino N, Vallasciani SA, Marrocco G

Division of Pediatric Surgery, Ospedale San Camillo-Forlanini, Rome, Italy

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Purpose: We compared the results of hypospadias repair using polyglytone versus polydioxanone to evaluate the potential benefit of using a suture with a rapid absorption time.

Materials and Methods: A total of 100 patients 8 to 24 months old affected by distal isolated penile hypospadias were considered for this study. Patients were randomized and assigned to 2 different groups according to the suture material used during the surgical procedure (tubularized incised plate repair with or without preputial reconstruction). Polyglytone was used in group A and polydioxanone was used in group B. All patients were evaluated at 4 intervals (1 week, 1 month, 6 months and 2 years postoperatively). Persistence of sutures on penile skin, urethral fistulas, skin dehiscence, infection and skin tracks were recorded. Statistical analysis was performed using chi-square test.

Results: Follow-up data documented the absence of significant differences in terms of urethral fistula rate, skin dehiscence and acute skin infection. Persistence of sutures and multiple skin tracks at long-term follow-up were significantly greater in patients in group B.

Conclusions: Both sutures are adequate for hypospadias surgery in small children. The use of a rapid absorption monofilament may allow much more rapid disappearance of the skin sutures. In the long term this outcome means almost complete absence of suture tracks. No statistically significant difference in terms of urethrocutaneous fistula was observed, suggesting that the tensile strength of polyglytone is adequate.

Editorial Comment

The suture material used in reconstructive surgery has always been problematic where durability, fineness and effect to the tissue are critical, especially for use in infants. A significant improvement was attained with the introduction of microsurgical instruments and sutures used with magnification (1).

Guarino et al. compared monofilament sutures (polyglytone vs. polydioxanone) with different strengths (6/0 vs. 7/0) (2). The authors observed an increased risk in knot breakdown; however, the most important difference noted was the duration time: 56d for polyglytone vs. 120-180d for polydioxanone. Polyglytone's long duration time might explain the higher proportion of granuloma, fistula and dehiscence when compared with polydioxanone.

Recently we reported our experiences in hypospadias reconstruction where the MEMO technique was used (3). Although only one suture material (plated polyglytone 7/0) was used in our study, the outcome was similar to the report by Guarino using monofilament polyglytone 6/0. The polyglytone 7/0 material we used is thinner but we did not experience knot break down nor did we note inflammatory reaction substantial developments such as granuloma, fistula or dehiscence.

A long-lasting (120-180d) suture material is not required to facilitate healing at the reconstructed glans location. With the reported experience in our patient group, we also noted, but we did not report in the MEMO paper (3), that monofilament sutures cause discomfort and irritation for the child and the parent because the monofilament suture tip snags easily against the child's diaper.

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**Dr. Joerg Seibold,
Dr. Karl-Dietrich Sievert & Dr. Arnulf Stenzl**
*Department of Urology
Eberhard-Karls-University Tuebingen
Tuebingen, Germany
E-mail: arnulf.stenzl@med.uni-tuebingen.de*

Recovery of erectile function after unilateral and bilateral cavernous nerve interposition grafting during radical pelvic surgery

Satkunasivam R, Appu S, Al-Azab R, Hersey K, Lockwood G, Lipa J, Fleshner NE
Departments of Surgical Oncology (Division of Urology) (RS, SA, RAA, KH, NEF), Biostatistics (GL) and Plastic Surgery (JL), University Health Network, University of Toronto, Toronto, Ontario, Canada
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Purpose: The use of cavernous nerve interposition grafting to preserve erectile function in men who require neurovascular bundle resection for cancer control is controversial. We report outcomes and predictors of cavernous nerve interposition grafting in men undergoing unilateral grafting during radical prostatectomy or bilateral grafting during radical cystectomy and prostatectomy with autologous nerve grafts.

Materials and Methods: We retrospectively reviewed the electronic records of 36 patients who underwent cavernous nerve interposition grafting between 2003 and 2006. Postoperatively erectile function was assessed with the International Index of Erectile Function 15-item questionnaire. Predictors of potency, including age at surgery, time since surgery and prostate specific antigen at surgery, were assessed by univariate analysis.

Results: A total of 33 patients (92% response rate) were followed for a median of 32, 25 and 11 months after bilateral grafting during radical cystectomy (10), unilateral grafting during radical prostatectomy (20), and bilateral grafting during radical cystectomy and prostatectomy (3), respectively. The rate of potency, defined as the ability to attain and maintain erection sufficient for penetration at least 50% of the time with or without phosphodiesterase-5 inhibitors, was 31% (5 of 13 men) for unilateral grafts, 38% (5 of 16) for bilateral grafts and 30% (3 of 10) for bilateral grafts during radical cystectomy. Age at surgery was the only significant determinant of potency and it showed an inverse relationship in the bilateral nerve graft group ($p = 0.02$).

Conclusions: Cavernous nerve interposition grafting appears to have a role in the recovery of erectile function. To our knowledge this study represents the largest series of cavernous nerve interposition grafting during cystectomy and it suggests that this should be considered during bilateral neurovascular bundle resection.

Editorial Comment

The reconstructive intraoperative approach of the cavernous nerve during radical prostatectomy or even cysto-prostatectomy represents a challenge for the surgeon. Satkunasivam et al. report in this paper their experience with unilateral and bilateral nerve grafting for the cavernous nerve reconstruction.

Although it might still be a point of discussion which material is the best for the graft to re-establish erectile function; sural nerve, genitofemoral nerve or other sources (1,2). The authors used the genitofemoral nerve in 94% of the cases and in the remaining cases, the sural nerve. In a comparison of all cases with a bilateral graft, those patients that received the sural nerve graft were potent; whereas, using the author's definition of potency, only 27.3% of the genitofemoral nerve graft patients were able to successfully maintain erection with a sufficient penetration rate of at least 50%.

Satkunasivam et al. reported on the largest group of radical cystectomy patients who underwent intraoperative nerve grafting. Their findings are consistent with Anastasiadis's report of a 30% success rate after bilateral nerve grafting subsequent to radical cystectomy (3). These reports underline that nerve grafting can be successfully achieved and should be performed if the morbidity of the patient is not endangered by the procedure. Perhaps with the further detailed knowledge about the peripheral nerves concourses on the prostate surface (4-6) and around the bladder, the successful outcome of nerve grafting can be further improved and nerve harvesting can be avoided with the use of regenerated acellular nerve grafts (7).

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**Dr. Karl-Dietrich Sievert &
Dr. Arnulf Stenzl**

*Department of Urology
Eberhard-Karls-University Tuebingen
Tuebingen, Germany*

E-mail: arnulf.stenzl@med.uni-tuebingen.de

UROLOGICAL ONCOLOGY

Secondary cancer after radiotherapy for prostate cancer: should we be more aware of the risk?

Bostrom PJ, Soloway MS

Department of Urology, University of Miami Miller School of Medicine, Miami, Florida, USA

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Objectives: As the number of prostate cancer survivors is increasing, the long-term health of prostate cancer patients has become a significant health issue. Radiation is known to induce malignant transformation, and prostate cancer radiotherapy is suggested to induce secondary malignancies. This report reviews the available data regarding the risk of secondary cancer after radiation for prostate cancer.

Methods: Epidemiological studies of the secondary cancer risk in patients with a history of prostate cancer radiation and the literature regarding radiation-induced carcinogenesis were reviewed.

Results: Prostate cancer is not associated with an increased number of additional malignancies. The data suggests a modest increase in secondary cancers associated with radiation for prostate cancer, as approximately one in 70 patients undergoing radiation and surviving more than 10 yr will develop secondary cancer. The most common sites for secondary cancers are bladder and rectum. In addition to the cancers adjacent to the radiation field, there is also an increase of cancers in distant sites, such as lung. The increased risk for secondary cancers is reported after external radiation, not after brachytherapy. The available data originated from studies of patients undergoing conventional radiotherapy. New treatment methods, such as intensity-modulated radiotherapy, may be associated with a higher risk of secondary cancers.

Conclusion: Although the incidence of secondary cancers after prostate cancer radiotherapy is not dramatically different from the overall population, patients should be informed about this risk. Other treatment modalities should be considered for patients with long life expectancy and for patients with additional risk factors.

Editorial Comment

Long-term survival after radiotherapy for prostate cancer is not uncommon. The risk of secondary cancers contributable to radiotherapy was analyzed in this review of the literature.

First, the authors analyzed the association of prostate cancer with secondary cancers. In 7 reports on roughly 90,000 patients, no elevation of risk for secondary cancers was obvious. The next analysis involved