INVESTIGATIVE UROLOGY

The laparoscopic management of intersex patients: the preferred approach

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BJU Int. 2005; 95: 863-7

Objective: To present possibly the largest series of the use of laparoscopy for treating intersex patients.

Patients and Methods: Fifty intersex patients (34 with male and two with female pseudohermaphroditism, nine with gonadal dysgenesis, four with true hermaphroditism, and one with complex hypospadias), aged 0.5-46 years (mean 18.3), underwent laparoscopy to remove gonads and/or ductal structures incompatible with the social gender, or for gonadal tumour or a potential risk for malignancy. When necessary, genitoplasty was performed concomitantly.

Results: At the laparoscopic evaluation, 10 gonads of six patients were absent, while four were identified as 'vanishing'; 72 gonads (46 dysgenetic, 17 normal testes, one normal ovary, one ovotestis, seven gonadoblastomas or dysgerminomas) were removed; two ovotestes were replaced in the scrotum after removing the ovarian segment, as was one normal testis. Twelve patients with a urogenital sinus had its vaginal component removed, 11 including a hysterectomy. Three of these patients had a combined perineal approach to complete its removal, together with masculinizing genitoplasty. There were no intraoperative complications or conversions; two patients had complications after surgery.

Conclusions: Laparoscopy allows the straightforward identification and removal of gonads. All abnormal ductal structures must be removed, as this increases the chance of resecting unidentified gonads. Removing the uterus and vaginal component of the urogenital sinus in patients with male social sex is feasible, with low morbidity. Genitoplasty, according to the social sex, can be performed in the same procedure.

Editorial Comment

The authors present the largest series of patients with intersex treated by laparoscopy. Different from the most recent series of intersex patients, due to specific social and geographical conditions of a developing country, most of the patients in this study were first evaluated as adults, and therefore treated accordingly to the already defined sexual situation. Nonetheless, whenever necessary, associated genitoplasty was performed, according to the sexual function of each patient.

Laparoscopy is usually used for gonadal evaluation, resection or biopsy, and for identifying internal ductal derivatives. It is also used for removing all normal structures contrary to the assigned social sex, as well as gonads that are dysgenetic, nonfunctional or malignant or of increased malignant potential. In the present work, the authors completed all procedures in 50 patients with minimal blood loss. The duration of the procedures was 55 to 270 min, including associated genitoplasty. There were no complications during surgery or conversion to laparotomy. When there was only a laparoscopic procedure the hospital stay was 1 to 3 days, and with associated genitoplasty, the stay was 6 to 11 days.

The authors concluded that this technique allowed easy identification and removal of gonads. They also found that other organs could be removed and genitoplasty performed with minimal morbidity.

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Prostate cancer dedifferentiation following antiandrogen therapy: a morphological finding or an increased tumor aggressiveness?

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Rev Assoc Med Bras. 2005; 51: 117-20

Background: Neoadjuvant androgen deprivation in prostate cancer induces tumor volume regression but does not improve outcome of the patient. A possible explanation for this phenomenon could be an increase of the residual tumor aggressiveness brought about by antiandrogen therapy. The purpose of the present study was to evaluate the frequency of tumor dedifferentiation following androgen blockade in prostate cancer and to determine if the remaining tumor shows signs of increased aggressiveness.

Methods: Thirty patients bearing locally advanced prostate cancer (stages T2c - T3) were submitted to neoadjuvant anti-androgenic therapy during four months followed by radical prostatectomy. Gleason scores from biopsy and surgical specimens were compared. Furthermore, the cell proliferation index was evaluated by immunohistochemistry assay for PCNA, tests with strong nuclear staining were considered positive. The percentage of positive nuclei, counted in 500 cells, was determined in several categories of the Gleason score from surgical specimens.

Results: In 11(37%) surgical specimens the Gleason score was equal or lower than that found in the biopsy and in 19 (63%) the total score was higher in the surgical specimens ($p < 0.05$). The median of PCNA expression was 4.5%, 10%, 12% and 14% in Gleason scores 2-4, 5-6,7 and 8-10, respectively ($p > 0.05$). The median of cell proliferation indexes was 9% for glandular or specimen confined tumors and was 17% for extraprostatic tumors ($p < 0.05$).

Conclusion: High Gleason score was found in almost 2/3 of patients submitted to antiandrogen therapy. However, the cell proliferation index measured by PCNA was the same for tumors with lower or higher Gleason scores. It seems that cell dedifferentiation seen after neoadjuvant androgen deprivation represents a mere morphologic phenomenon and not a real increase in tumor aggressiveness.

Editorial Comment

In the present study, the authors observed a significant increase in the Gleason score in the surgical specimens of prostate carcinoma after hormonal therapy. This fact was verified in 64% of the tumors initially classified as well and moderately differentiated. Nevertheless, comparing the expression of PCNA in relation to Gleason score of surgical specimens, the authors observed similar proliferation activity. Analyzing the data, the authors argue that probably it is just a morphological phenomenon, since the similar proliferative activity means that the tumors have the same aggressiveness.

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