



## Words of Wisdom

### Re: Use of Ultrasonography for the Diagnosis of Testicular Injuries in Blunt Scrotal Trauma

Buckley Jill C, McAninch Jack W

J Urol 2006;175:175–8.

#### Expert's summary:

Dr. Buckley and Dr. McAninch describe their experience with blunt testicular trauma at San Francisco General Hospital. In their treatment algorithm they do not explore surgically every haematocele but rather determine the initial size and dynamics. A large (>5 cm) or expanding scrotal haematoma is explored. If it is ≤5 cm and not actively enlarging, they often opt for conservative management, consisting of elevation, scrotal support, nonsteroidal anti-inflammatory medication, icing, and pain control. In the setting of a tender or severely distorted scrotum, palpation of the testicles is almost impossible and clinical examination is inconclusive. In these cases, to determine which cases need immediate surgical exploration they perform scrotal ultrasonography. If a heterogeneous echo pattern of testicular parenchyma with a loss of contour definition (without attempting to identify a fracture of the tunica albuginea) is found, surgical exploration is indicated.

They performed a retrospective review of 65 patients who presented with blunt scrotal trauma and where managed following the algorithm previously described. Twelve patients required immediate surgical exploration due to large or expanding scrotal haematomas. Six patients had small scrotal haematomas (<5 cm) that were treated conservatively. None had delayed complications. Forty-seven patients with inconclusive clinical examinations had scrotal ultrasonography. In 15 patients, ultrasound did not find signs of testicular rupture or heterogeneous echo patterns of the testicular parenchyma. These 15 patients were treated conservatively and none had delayed com-

plications. In 32 patients, scrotal ultrasonography found heterogeneous echo patterns of testicular parenchyma with a loss of contour definition. These 32 men underwent immediate surgical exploration and 30 of them had a testicular rupture; 25 could be repaired and 7 underwent immediate orchiectomy. In 2 cases the tunica albuginea was not ruptured (one intratesticular haematoma that was decompressed and one bruised testicle). Scrotal ultrasonography was 100% sensitive and 93.5% specific as a diagnostic tool to guide the management of blunt scrotal trauma.

#### Expert's opinion:

This paper contains useful information to guide the management of blunt testicular trauma. Cass and Luxenberg [1,2] demonstrated in the past that in cases of blunt scrotal trauma with haematocele early surgical exploration provided better results than conservative management (patients resume normal activities earlier and number of orchiectomies is lower). However, in cases where clinical examination is nondiagnostic (swollen testicle, tender and distorted scrotum) ultrasonography helps to distinguish the necessity for operative versus nonoperative management [3]. The identification of a fracture of the tunica albuginea even in the absence of haematocele is a clear indication for surgical exploration [3]. The novelty of this paper is that it is not necessary to identify the fracture of the albuginea on ultrasound to indicate surgery, because this sign has a low sensitivity. Just using the single radiographic criterion of 'heterogeneous echo pattern of the testicular parenchyma with a loss of contour definition' is enough to indicate surgery (100% sensitivity, 93.5% specificity). The management of intratesticular haematomas is still debatable. Contusions and haematomas less than one third of the testicular size can resolve with conservative management [3]. Larger haematomas may need

decompression, although no consensus can be found in the literature.

## References

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## Re: Prostate Specific Antigen Levels in Young Adulthood Predict Prostate Cancer Risk: Results from a Cohort of Black and White Americans

Whittemore AS, Cirillo PM, Feldman D, Cohn BA

*J Urol* 2005;174:872–6.

### Expert's summary:

Whittemore et al. used a serum samples drawn from 20- to 55-year-old men with an average age of about 35 years to show that those with prostate specific antigen (PSA) levels in the highest quartile have approximately a 4-fold risk of being diagnosed with prostate cancer within the next 4 decades, compared with those in the lowest quartile. Among possible explanations for this association, the presence of malignant cells in the prostate at the time of sampling is considered most likely. The authors discuss the impact of their findings on prostate cancer screening and suggest that monitoring of serum PSA could be used to identify young men at increased risk of developing prostate cancers.

### Expert's opinion:

Opportunistic screening on the basis of determining PSA is being used increasingly to detect prostate cancer at a curable stage. However, evidence for a positive effect on survival is still lacking and, when radically treated, one third of patients detected by this approach experience a relapse [1]. Screening at a younger age and with a lower cutoff is therefore recommended by some experts; results of the study of Whittemore et al suggest that this approach might be possible already in men aged 30 to 40 years. The

authors suggest that young men could be monitored with PSA determinations to detect early development of prostate cancer, but many questions need to be answered before this approach can be recommended. The risk increases already in the second quartile of PSA levels; thus, the positive predictive value (PPV) of PSA may be very low. It would be important to know if there is a PSA cutoff above which the PPV is acceptable for selection of men for monitoring. Another important question is whether a high PSA also predicts an adverse outcome. Many prostate cancers grow very slowly, and if a tumor, which is large enough to increase serum PSA at age 35, is diagnosed only 30 years later, it probably has grown very slowly. Thus, it possible that the tumors detected are not very aggressive, and this knowledge is important. It would also be essential to know if an elevated PSA in the fourth decade of life is an adverse prognostic sign for survival. Whatever the answers to these questions are, the results of this study provide very interesting new information on the development of prostate cancer and the possibilities for improving early diagnosis and treatment.

## Reference

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## Re: Secondary Hormonal Therapy for Advanced Prostate Cancer

Lam JS, Leppert JT, Vemulapalli SN, Shvarts O, Belldgrun AS

*J Urol* 2006;175:27–34.

### Expert's summary:

This article highlights the continuing role of the androgen receptor (AR) in prostate cancer cell proliferation after relapse following primary hormonal therapy. After testicular androgen deprivation, prostate specific antigen (PSA) response rates

of up to 50% have been obtained with androgen receptor antagonists, steroids and adrenolytic therapies. Oestrogens and progestins are slightly less effective but, because of a possible cytotoxic activity on dividing cells, may warrant further development and evaluation. The use of sequential hormonal therapies may postpone the need for chemotherapy.

#### Expert's opinion:

With the paradigm shift in the presentation stage of clinical prostate cancer and the earlier use of hormone therapies occurring in the last 10 years, there is a corresponding stage shift in the presentation of patients with apparently androgen-independent cancer (AIPC), many of whom have no evidence of metastases and are asymptomatic with only a rising PSA as an indication of progression [1]. Before offering these patients toxic chemotherapy, it is worthwhile considering the use of (relatively) non-toxic secondary hormonal therapy—or even no therapy at all—until further objective evidence of progression appears [2]. Prognostic factors, such as the tumour size and PSA doubling time, have been found indicative of a need for early aggressive therapy (i.e., chemotherapy). The FDA will accept only improvements in overall or progression-free survival as evidence of activity of agents in the management of AIPC [3]. However, on the basis of the seminal work of Scher and his colleagues [4] at Memorial Sloan-Kettering Cancer Center on the treatment of AIPC, many clinicians accept a 50% fall in PSA at 12 weeks as evidence of therapeutic activity, which, while falling short of true surrogacy, has been demonstrated to be a consistent correlate for survival. In many series of secondary hormonal therapy in AIPC, such a response has been seen in between 20% and

70% of patients. The responses usually are of short duration (<6 months), but some have lasted 2 years or more [5]. Mutations or other alterations in the AR and other growth factor receptors or co-activators probably are responsible for the continuing sensitivity to hormonal manipulations. In this article, a variety of secondary treatments, with their limitations, are described including anti-androgens, oestrogens, differentiation agents (i.e., luteinizing hormone-releasing hormone antagonists) and the new lyase inhibitors. The authors conclude that the time between the demonstration of asymptomatic PSA progression and the demand for aggressive chemotherapy is an ideal window of opportunity for the use of secondary hormonal therapies and, possibly, the investigative use of new novel agents.

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#### Re: Docetaxel and Estramustine Compared With Mitoxantrone and Prednisone for Advanced Refractory Prostate Cancer

Petrylak DP, Tangen CM, Hussain MH, et al.

*N Engl J Med* 2004;351:1513–20.

#### Re: Docetaxel Plus Prednisone or Mitoxantrone Plus Prednisone for Advanced Prostate Cancer

Tannock IF, de Wit R, Berry WR et al.

*N Engl J Med* 2004;351:1502–12.

#### Expert's summary:

These two papers which appeared back to back in the same issue of the *New England Journal of Medicine* looked at the effects Docetaxel in different combination against the current standard of care for hormone refractory disease of mitoxantrone plus Prednisolone. The SWOG study 9916 had randomised 770 patients to receive either docetaxel and estramustine or mitoxantrone and prednisone. Patients on the docetaxel combined arm had a 20% improvement in overall survival with a median survival time of 17.5 months compared with 15.6

months in the mitoxantrone group ( $p = 0.02$ ) Median time to progression was also longer at 6.3 months compared with 3.2 months ( $p < 0.001$ ). The second study Tax 327 a multi centre randomised trial mitoxantrone was given every 3 weeks with docetaxel given either weekly and or every 3 weeks in 1006 men all men received prednisone 5mg orally twice daily. Median survival was better in the docetaxel regime given every 3 weeks (18.9 months) compared with the mitoxantrone regime 16.5 months ( $p = 0.09$ ) no survival advantage with the weekly docetaxel regime survival 17.4 months ( $p = 0.36$ ). There was a 24% reduction in the risk of death for patients treated with the tri weekly regime both pain responses and quality of life indices were all better on the docetaxel regime.

These two randomised trials showing a benefit albeit small for docetaxel have set the new standard of care for hormone resistant prostate cancer.

#### Expert's opinion:

Many patients who progress after definitive therapy or are started on hormones because definitive therapy is unsuitable are defined nowadays as having hormone refractory disease once the PSA rises without evidence of objective metastatic disease. Although conventionally in the metastatic group it is still considered that 18 months to 2 years is the duration of the response to hormones clinical practice shows that this response is very frequency twice the old standard. There are no new hormones but the use of secondary hormone therapy has undoubtedly allowed this extension.

In days when only surgical castration or oestrogens were available it was a well known phenomenon that on progression the other therapy induced objective clinical responses although there was no rational reason for why this should be the case. In a rush to embrace the new, there is a significant danger that the well tried regimes in what is a

hormone sensitive tumour may well be lost and significant periods of palliation sacrificed or novelty.

Second line hormone therapy with oestrogens or anti androgens and indeed third line hormone therapy should be tried with the same strict criteria of response i.e. 50% or greater fall in PSA before truly defining the patient as hormone refractory and moving on to other therapies. It would be disappointing if the period of benefit that has now been achieved for patients by more skilled use of the hormone therapies available were to be lost and merely that same period achieved by more toxic medicines.

Whilst the results of randomised trials in the possible utility, in high risk patients, for earlier use of chemotherapy are awaited, the generality of patients, not in trials, should have the benefit of all hormone manipulations before moving on to newer therapeutic options [1–4].

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#### Re: The Use of the Sexual Function Questionnaire as a Screening Tool for Women with Sexual Dysfunction

F. Quirk, S. Haugie, T. Symonds

*J Sex Med* 2005;2:469–77.

#### Expert's summary:

The authors used data from five clinical trials and two general populations surveys to determine the capacity of the validated inventory Sexual Function

Questionnaire (SFQ) to identify women with sexual dysfunctions. Both women being clinically diagnosed with one of the above mentioned sexual dysfunctions and women from general populations were assessed. Namely, the questionnaire aims at identifying all possible dysfunctions including hypoactive sexual desire disorder, female sexual arousal disorder, female orgasmic disorder and sexual pain disorder. The authors showed that the SFQ domains were useful in detecting the presence of specific components of female sexual dysfunctions.

**Expert's opinion:**

This study is important in that it underlines the validity of SFQ as a screening tool for female sexual dysfunctions. As urologists, we routinely face common medical problems in women including urinary tract infections, incontinence and lower urinary tract symptoms. There is evidence [1,2] that these symptoms may be associated with various forms of sexual dysfunctions in up to 50% of cases. Of note, most of these issues would not be reported spontaneously by the female patient if not specifically asked. Reasons for this include patient's embarrassment, not being aware that there are treatments available and not recognizing the urologist as the physician responsible for taking care of these dysfunctions. The above mentioned article clearly tells us that by simply distributing the SFQ (which has to be self administered!) one is able to identify with precision the various female sexual dysfunctions.

We all recognize the need to use data from a questionnaire only as the starting point towards the complete patient's investigation. A questionnaire cannot substitute the role of the general practitioner or of the urologist: at the same time in 2006 we as urologists cannot ignore that these questionnaires are available and have a recognized value for our everyday practice.

**References**

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