The objective of this study was to evaluate the relationship between pre-treatment erectile function and all-cause mortality in patients with prostate cancer treated with brachytherapy.

In all, 1279 consecutive patients with clinically localised prostate cancer and pre-implant erectile function assessed by the International Index of Erectile Function-6 (IIEF-6) underwent brachytherapy. Potency was defined as an IIEF-6 score of $\geq 13$ without pharmacological or mechanical support. Patients were stratified into IIEF-6-score cohorts ($\leq 12$, 13–23 and 24–30). The median follow-up was five years.

The eight-year overall survival (OS) of the study population was 85.1 per cent. The eight-year OS for IIEF-6 scores $\leq 12$, 13–23 and 24–30 were 78.0, 92.8 and 91.4 per cent, respectively ($p<0.001$). Cardiovascular events accounted for a significant portion of deaths in each IIEF-6 group. When combined with other risk factors for cardiovascular disease (CVD), an IIEF-6 score of $\leq 12$ had an additive effect on all-cause mortality (IIEF-6 score of $\leq 12$ and less than two comorbidities versus two or more comorbidities were 18.2 and 32.1 per cent).

In conclusion, a pre-implant IIEF-6 score of $\leq 12$ was associated with a higher incidence of all-cause mortality. Pre-treatment erectile dysfunction (ED) is a surrogate for underlying vascular pathology, probably explaining the lower OS in this subset of patients. Aggressive treatment of medical comorbidity is warranted to impact OS.


MESSAGE FOR THE CLINIC

It is a great pity to cure a man of prostate cancer and allow him to die of CVD. This study underscores the importance of ED as a marker of underlying vascular disease. This provides a window of opportunity to address cardiovascular risk factors to prevent future CVD events. In this study, if the man had ED (IIEF score <12) prior to brachytherapy, this was associated with a higher incidence of all-cause mortality, of which CVD deaths were a significant proportion.

Disease of the vascular tree from the aorta to the penile arteries can cause ED by restricting blood flow into the penis, because the narrow vessels of the penis may be more prone to blockage than the larger vessels to the heart. In addition to this, the vascular risk factors act both at the level of the endothelium and platelet, which leads to both anatomical and physiological alterations, the result of which is functional impairment of the penile erection.
Therefore, vascular ED is a systemic condition and warns us that the man awaiting treatment for his prostate cancer may be carrying a potentially lethal portfolio of CVD risk factors. These may compromise his survival from the cancer unless they are addressed.

In addition to this, many treatments for prostate cancer impact on ED. Health professionals need to take a proactive approach to addressing ED in these men, because failure to do so has significant adverse effects on their quality of life.

REFERENCE RANGE FOR PENILE LENGTH

The objectives of this study were to establish a reference range for adult male genital size in the UK using penile length measurements, and to compare the reference ranges for normal penile length reported from several different countries and the anthropometric differences noted between different nationalities and ethnic backgrounds.

Over 20 months, genital measurements were taken from all men undergoing routine examination in clinics (n=499) and in operating theatres during examination under anaesthetic (n=110). Using a rigid metric ruler, three penile measurements were taken: flaccid pendulous penile length, flaccid penopubic penile length (to the pubic arch) and stretched flaccid penopubic length. In addition, testicular size was measured using an orchidometer. The patient’s age and the reason for referral were recorded. Statistical analysis was carried out using Pearson correlation analysis.

Measurements from 610 patients aged 16–90 years were available for analysis. The mean penile lengths were: pendulous length 8.7cm (SD 1.6cm), penopubic length 10.2cm (SD 1.4cm) and stretched length 14.3cm (SD 1.7cm). The mean testicular volume was 19.8ml (SD 5.4ml) for both left and right testicles. Men with penile disease (including phimosis and Peyronie’s disease) had slightly reduced penile length (pendulous −3.3mm, p=0.014; penopubic −2.3mm, p=0.029; stretched −5.1mm, p<0.001) compared with other referral groups (erectile dysfunction, testicular disease, prostate and bladder disease). There was no significant correlation between penile length and age or testicular size.

These data establish a reference range for adult Caucasian male genital size in the UK, which should be helpful for urologists when counselling patients.


MESSAGE FOR THE CLINIC

There is a wide range of size and appearance of the penis. The growth of the penis with age has been documented and a centile chart is available, published by Schonfeld in 1943. The normal adult appearance has not been as effectively documented. Most teenagers exploring their sexuality have anxieties, and concern about penile size is common. Unsolicited emails offering penile enlargement procedures often exacerbate the problem. Exposure to pornographic material can further add to the problem by providing unrealistic expectations. There is limited research into the relationship between penile size and sexual satisfaction, particularly from the partner’s point of view. In primary care, it is often reassurance that is necessary, combined with sex education.

This study establishes a reference range for adult Caucasian male genital size in the UK using penile length measurements. The data demonstrate an average flaccid pendulous length of 8.7cm and a stretched flaccid length of 14.3cm. The authors advise use of the stretched flaccid length because pendulous length may be confounded by prominent pre-pubic fat pad, and stretched length may better correlate with erected length. Pendulous flaccid length is from the tip of the penis to the base of the penis and stretched flaccid length is from the pubic bone to the tip of the penis, under gentle painless extension.

The threshold for a micropenis in UK men is 4.7cm pendulous length and 6.7cm penopubic length. The authors suggest that anything less than 10cm erect length can cause functional problems. Identification of micropenis in paediatric practice is important and treatment of hormonal deficiencies is effective at increasing penile size. Treatment of the adult micropenis is more controversial and both urological and psychological expertise should be sought.