



Incidence of Trans Rectal Ultra Sound Guided Prostatic Biopsy Related Mortality

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Abstract

TRUS prostatic biopsy related mortality has been reported to be 1.3%. We felt that this was too high and did not reflect our experience.

The objective of this study was to look at the TRUS related mortality in our centre.

Material and Methods: Electronic search was carried out on all the patients who had TRUS prostatic biopsy between January 2004 and July 2010.

Results: Two thousands two hundred and fifteen patients had TRUS guided prostatic biopsy in that period. Eighty four mortalities were cited. Only one was TRUS biopsy related (0.04%).

Conclusion: The high mortality rate reported by Gallia et al was not reflected in our study. Further larger studies are needed to establish the true mortality incidence with TRUS prostatic biopsy.

Mean while patients should be counselled about the rare possibility of a fatal out come with TRUS prostatic biopsy.

Introduction

Prostate cancer is the most common cancer affecting men in the United Kingdom, representing a quarter of all new cases of cancer diagnosed in men. In 2007 the number of new cases of prostate cancer diagnosed in Great Britain reached 36,101 cases. Prostate cancer in UK has tripled over the past three decades.(1)

Majority of prostate cancer cases (60%) are diagnosed in men aged 70 years of age.

Prostate cancer is mainly diagnosed with Trans Rectal Ultra Sound guided biopsy.

Gallina et al was the first to report on TRUS prostatic biopsy related mortality(2).

The reported rate was 1.3%. We felt that this was too high and did not reflect our experience.

The objective of this study was to look at the TRUS related mortality in our centre.

Methods

Electronic search was carried out on all the patients who had TRUS prostatic biopsy between January 2004 and July 2010, using Electronic Patients Records (EPR). Notes of all deceased patients were examined to establish if their death was related to the prostatic biopsy.

Results

Two thousands two hundreds and fifteen patients had TRUS guided prostatic biopsy between January 04 and July 2010.

Age range was 42 – 85, average 64.

Eight Tru cut needle biopsies taken until January 06, then 12 cores became the standard. The procedure was done under local anaesthetic infiltration using 10ml of 1% lignocain and antibiotic prophylaxis in the form of ciprofloxacin 500mg every 12 hours for three days, given one hour before the biopsy.

Eighty four mortalities were cited. Only one was TRUS biopsy related (0.04%).

68 years old fit and other wise healthy, died 2 days after the biopsy. Cause of death was intra cerebral haemorrhage secondary to septicaemia.

Discussion

The prostate gland is accessible trans-rectally. The first reported needle prostatic biopsy was carried out in 1930 by Ferguson (3) using gauge 18 needle and it was done trans- perieally. The first trans-rectal prostatic biopsy was reported by Astraldi in 1937 (4). The first diagnostic trans rectal ultra sound was reported by Takahashi and Ocli in 1963 (5), however the imaging quality was poor, and although Four years later Watarabe et al (6) were able to produce a clinically applicable images using a 3.5 MHz trans-rectal probe, it was until the mid 1980s and with the development of the 7MHz probe that TRUS guided prostatic biopsy increasingly became the standard way to diagnose prostate cancer. Initially it was

trans-perineal and this was quickly taken over by the trans-rectal route.

The biopsy was performed as an out patient procedure under antibiotic cover and local anaesthetic infiltration, with the patient in the left lateral position. 10 – 12 Trucut needle cores taken.

TRUS biopsy complications are well publicised (7,8,9,10). Bleeding was the main reported complication, with haematuria affecting 22 – 56% (8,9,10) while rectal bleeding affects 17 – 32% of patients (9,10), majority settling down within a week.

Haematospermia was reported in 12 – 50% of patients, and this may take up to 12 weeks to resolve (8,9).

Other less frequent complications have been reported, such as acute retention of urine affecting 0.4 – 2% of patients, those with high IPSS (International Prostate Symptom Score) are at increased risk. Acute epididymitis 0.2% - 0.6% (7,10); vasovagal syncope 0.05% (7); acute prostatitis 0.6% - 3.8% (7,10).

The most serious complication was sepsis affecting 0.5 – 1.7% of patients (8,10).

Hospitalisation rate was 0.2 – 6.6 % (7,8,9,10).

A med line search was carried out to look at TRUS prostatic biopsy related mortality. Only one report was found by Gallia et al(2). The team investigated the cause of death in 22000 patients who had TRUS guided prostatic biopsy up to 120 days after the biopsy. Their TRUS related mortality was 1.3%.

The high mortality rate reported by Gallia et al was not reflected in our study, part of this could be the smaller sample we had.

Conclusion(s)

Further larger studies are needed to establish the true mortality incidence with TRUS prostatic biopsy.

Meanwhile patients should be counselled about the rare possibility of a fatal outcome with TRUS prostatic biopsy.

Abbreviation(s)

TRUS - Trans Rectal Ultra Sound

Reference(s)

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