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Title: LOWER URINARY TRACT SYMPTOMS MAY BE AN EXPRESSION OF ANXIETY: THE PROTECT STUDY

Aims of study:

Screening for prostate cancer is controversial. It is generally accepted that it should not be introduced because of the lack of evidence about the effectiveness of treatments (particularly the failure to show survival benefit) and concerns about the deleterious impact of current treatments on men's quality of life (1). The ProtecT (**pro**state **te**sting for **c**ancer and **T**reatment) feasibility study was set up in the UK to establish whether it would be possible to mount a full scale randomised trial of treatment following case-finding in the community. There were concerns that case-finding might affect men's psychological health status and so this paper focuses on levels of anxiety/depression among men at baseline (PSA test) and for those with abnormal PSA results at the time of biopsy. Also investigated were levels of lower urinary tract symptoms to examine whether mostly symptomatic men attended case-finding.

Methods:

The ProtecT feasibility study involved a two-year programme of case-finding amongst men in the community in the UK, with men with localised disease invited to be randomised within a randomised trial of treatments (radical prostatectomy, radical radiotherapy and monitoring). Case-finding involved inviting men aged 50-69 years from GP practices to attend a clinic appointment including detailed information about the implications of having a PSA test. Men with a raised PSA result (≥ 3.0 ng/ml) were invited to undergo a further PSA test and TRUS-guided biopsy. Men with localised prostate cancer were invited to consent to randomisation within the treatment trial. Levels of anxiety and depression were measured by the Hospital Anxiety and Depression Scale (2) and LUTS by the ICSmale questionnaire (3) at two time points: the PSA test (baseline) and for those with raised PSA levels, at the time of biopsy.

Results:

As of January 2001, 4882 men had undergone PSA tests. Of these, 549 (11%) were raised and the vast majority consented to biopsy. Data are available on 4100 men at baseline and 300 at biopsy.

Table 1 shows that levels of anxiety and depression were not particularly high at baseline, with only 8% of men having levels of anxiety consistent with being a psychiatric case. Levels of depression were low. Individual items of anxiety were quite high, particularly feelings of tension and worry. Most interestingly, levels of depression and anxiety were similar or lower at the time of biopsy – not raised as might have been expected.

Table 1: Levels of anxiety and depression (HAD)

	Baseline (n=4,100)	Biopsy (n=300)
Anxiety – case (score >10)	8%	6%

Ever feel tense	77%	77%
Worrying thoughts	64%	57%
Frightened feelings	42%	50%
Ever panic	45%	39%
Depression - case (score >10)	2%	0.3%

Table 2 shows the levels of LUTS at baseline and biopsy (see below). At baseline, levels of LUTS are quite similar to those found in population samples of men aged between 50 and 69 years. At the time of biopsy, however, levels of LUTS are markedly raised in comparison with baseline levels. These increases in the proportions of men reporting LUTS are considerable (see Table 2).

Table 2: Levels of LUTS (ICS_{male} questionnaire)

	Baseline (n=4,100)	Biopsy (n=300)
Frequency	27%	37%
Nocturia	17%	25%
Hesitancy	48%	68%
Urgency	47%	54%
Urge incontinence	21%	29%
LUTS interfere with life	22%	30%

Conclusions:

Levels of anxiety and depression do not appear to be particularly high amongst participants in the ProtecT study, even though the uncertainties around PSA testing and prostate cancer treatment have been explained to these men. Cases of anxiety and depression are low, and are surprisingly lower at biopsy than baseline. Individual items indicating anxiety also appear to fall between baseline and biopsy. Contrastingly, levels of LUTS are consistent with population levels at baseline, but then show marked increases at the time of biopsy. This suggests that the requirement for biopsy does not necessarily increase anxiety and depression. When they are aware of the need for biopsy, however, men may focus their attention on urinary symptoms which are then perceived to worsen. An alternative explanation is that men's anxiety about prostate cancer may be expressed more easily in terms of physical symptoms (LUTS) rather than psychological feelings – somatisation.

1. Prostate cancer: to screen or not to screen? *Lancet Oncology*. 2000; 1: 17-24.
2. The Hospital Anxiety and Depression Scale. *Acta Psychiat Scan*, 1983; **67**:361-370
3. Scoring the ICS_{male}SF questionnaire. *Journal of Urology*. 2000; 164: 1948-1955.

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