SHOULD WE BE SCREENING FOR PROSTATE CANCER?

In the UK screening for prostate cancer (PCa) with the blood test Prostate Specific Antigen (PSA) remains as controversial as ever despite deaths over 11,800/year, now exceeding those for breast cancer. This unsatisfactory situation has arisen for multiple reasons summarised in Box 1.

**BOX 1**

- Lack of male awareness.
- Reluctance of males to seek medical attention.
- Poor access for males, especially working men.
- An NHS not geared for men.
- Underfunding of PCa research.
- Insufficient urological training for GPs.
- Inadequate or misleading information supplied to GPs.
- Haphazard use of PSA.
- No centrally organised screening programme.

Over 47,000 new cases are diagnosed every year and this figure, together with the death rate, is predicted to rise. UK cure rates lag well behind most of our European neighbours and our death rate has not fallen by the 54% seen in countries that use PSA screening.\(^1\) This is thoroughly unsatisfactory and discriminates against men. What should be done?

Given that the overall strategy of the NHS is one of prevention and early diagnosis, a minimum requirement should be the promotion of full and balanced information to all men on PCa risk and up to date information to GPs on PSA and screening.

**Prevention**

There is little proven evidence that any diet or dietary supplement (nuts, selenium, zinc, vitamin E) prevents or lowers the risk of PCa. There is however growing evidence that obesity increases the risk of PCa.

**Early Diagnosis**

Early, “localised” PCa confined within the prostate causes no symptoms and can be cured. Early “locally advanced” PCa spreading just outside the prostate may also be curable in some cases, but late, locally advanced PCa and PCa that has spread elsewhere – “metastatic” – is not curable. At present in the UK only 49% of patients present with early PCa. The remaining 51% present with advanced disease – 16% metastatic – and these are the cases that contribute almost exclusively to our unacceptably high death rate.\(^2\)

Early diagnosis and treatment is also cost-effective. It has been estimated that the cost of long-term treatment of incurable PCa is £240,000/patient, from diagnosis of advanced PCa to ultimate death many years later!
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Trial Evidence For Early Diagnosis

At present the only available way to detect early, curable PCa is with an initial PSA screening blood test before symptoms arise.

Single, random PSA estimations are of some value in establishing risk but do little to reduce PCa death rates when used in isolation, as in the CAP study, and do not constitute an effective screening programme. Properly conducted European screening programmes with repeated PSAs over at least a decade and follow-up of at least 10 years show reductions in PCa mortality of 29-56%; the latest programme from California reports a reduction of 64%! Consequently the number of men we need to screen to save one life has fallen to 293 and the number needed to treat to 12; figures similar to breast cancer screening.

The UK Screening Controversy

The UK’s Prostate Cancer Risk Management Programme (PCRMP), sent to all GPs in 2016, states clearly “The PSA test is available free to any well man aged 50 and over who requests it.” Despite this many GPs are refusing to do PSAs, even for men at high risk, on the grounds that the “harms” of screening outweigh the benefits. Advances in UK practice now make this a totally outdated argument despite it still appearing in reputable UK journals!

BOX 2

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<thead>
<tr>
<th>“Harms”</th>
<th>Benefits of Current UK Practice</th>
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<tbody>
<tr>
<td>1. Over-diagnosis of insignificant non-aggressive PCa (n-a PCa)</td>
<td>Consensus men at risk criteria</td>
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<td>Consensus referral guidelines</td>
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<td>mpMRI before biopsy</td>
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<td>Improved biopsy techniques</td>
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<td>2. Over-treatment of n-a PCa</td>
<td>MDT governance of treatment decisions</td>
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<td>Active surveillance for n-a PCa</td>
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The latest UK National Prostate Cancer Audit confirms that the over-treatment rate continues to fall and is now down to 8%.

With the safety of Active Surveillance as management of n-a PCa confirmed by UK trials, the concern of urologists is now turning to under-diagnosis of aggressive PCa.

Screening Criteria

The European Association of Urology has comprehensive guidelines endorsed by all 28 EU member states on screening and early diagnosis which merely need to be implemented by the UK. Screening must be systematic and fully informed to be cost-effective and avoid over-diagnosis and over-treatment.
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A consensus on guidelines can be summarised thus:⁹

- For all men, obtain a baseline PSA in your 40s to predict future risk. Continue testing with frequency determined by risk.
- Do not screen below age 40 or with less than 10 years’ life expectancy.
- Black men or mixed race men of African or Caribbean descent have a 1 in 4 lifetime risk of PCa and should start screening in their 40s.
- Men with a father, brother or uncles who have had PCa or if there is breast cancer on the mother’s side, have at least double the risk and should start screening in their 40s.
- Frequency of testing can be estimated by risk assessment.

Conclusion

There is an array of new trials, new treatments and a complexity of treatments that demand the management of PCa by specialised units, all of which would be enhanced by a properly organised, centrally controlled screening programme.

The benefits of PSA-based screening now clearly outweigh the harms. We therefore conclude that the quickest way to reduce the UK’s unacceptable PCa death rate is to adopt standards that are the norm in our Western European neighbours and introduce a PSA screening programme now rather than delay any longer in the hope of finding some ideal marker at some indeterminate point in the future after many more men have died unnecessarily from this most pernicious of cancers.

Tackle Prostate Cancer, October 2018

References

1. van Poppel, H. Government Gazette: 2018 (2), 76-77
2. 4th National Prostate Cancer Audit: 2017; HQIP, London
9. BJU Int 2014; 113: 186-8