Emerging trends in prostate cancer literature: medical progress or marketing hype?

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Introduction

Since the introduction of PSA testing, treatment options for clinically localised prostate cancer (PCa) have proliferated. Prostate surgery, hormonal therapy and radiation therapy have rapidly grown in technique and delivery. Deferred intervention in the form of active surveillance or watchful waiting has been widely adopted, while focal therapies using various energy techniques are gaining data as potential alternatives to radical treatment. The medical literature dedicated to PCa treatment has exploded over this period, although an absence of high-quality evidence supporting one method over another is apparent [1,2]. Consequently, healthcare workers and patients have been inundated with PCa literature, but with little guidance on comparative effectiveness and harms of treatment. This sheer volume of research raises concerns over its true value in improving the treatment and prevention of disease. Is such literature actually beneficial to medical progress, or does it amount to hyperbole and medical hype?

In the present article, we have examined trends in the PCa literature by searching for treatment terms within a single database (MEDLINE), from January 1992 to December 2012. Search terms were applied as medical subject headings (MeSH) and free-text protocols (with truncation) in different combinations pertaining to PCa. A number of concerning trends have been identified from these literary findings. The first is the accelerated growth in PCa literature pertaining to external beam radiotherapy (Fig. 1A), prostatectomy (Fig. 1B), deferred intervention (Fig. 1C) and focal therapy (Fig. 1D). Similarly, the number of urological journals returning searches for radical prostatectomy (from Fig. 1B) has substantially risen from 14 in 1992 to 68 in 2012. This trend of expanding journal listings coincides with an overall diversification in subject matter, and hastened publication, all of which may compromise article size and depth of analysis [3].

Another observed trend has been the inconsistent use of terminology. Deferred intervention, for example, can be through either watchful waiting (also termed deferred treatment or symptom-guided treatment in the literature), with conservative management until the development of symptoms, or active surveillance (also termed active monitoring) of the disease with intention to treat at thresholds that define progression, usually with PSA levels. These terms are used interchangeably, in spite of distinct patient characteristics. Evidently, once the use of incorrect terms becomes common, their appearance throughout the literature is difficult to contain.

Rectifying these trends requires contributions from researchers, review boards, editors and database administrators alike. Murphy [3] advocate that editors and review boards scrutinize
the basis of any proposed work, the questions being addressed in a study and their importance. This would probably necessitate tightening of the peer review process, a longer follow-up of clinical studies, and allowing more pages per article despite the risk of not being first to publish. For prospective authors, this scenario would entail a greater focus on research methodology with early involvement of those trained in quantitative methods. Authors should be transparent in their disclosure of commercial sponsorship agreements to ensure journal editors can appreciate the circumstances by which manuscripts are submitted. Sismondo and Doucet [5] promote the rejection of all sponsored trials because of the unjustified risk to trial participants and the general public; however, this stance fails to appreciate the considerable funding required for conducting many of these trials.

For progress in PCa treatment to continue, research that builds on the work of previous projects must be conducted with the overall goal of advancing scientific knowledge. Researching novel technology, for instance, can take the approach of incremental advances of an existing technique or the first stage of what should be considered a formal research project [2]. The latter approach should be used for radiotherapy research investigating beyond a different dose, fractionation schedule or target volume of previous techniques [6]. Focal therapy, with perhaps the exception of cryosurgical ablation, should remain as an investigational therapy subject to rigorous evaluation before its widespread application as PCa treatment [4]. Randomised controlled trials are the ‘gold standard’ for assessing clinical effectiveness. These may not be feasible in the early stages of technical innovation, such as in determining safety or feasibility of the technology, in which case prospective comparative cohort studies with the establishment of national or international treatment registers should be undertaken [6].

Using standardised terms through the efforts of researchers and database administrators will improve international collaboration and communication between healthcare professionals, researchers and patients. In addition, database searches should be regularly updated to keep pace with current trends in PCa treatment. For example, MEDLINE
which uses indexing rules (like MeSH) to maximise searches for retrievable and relevant articles, currently has no MeSH indexing for active surveillance. Since 2008, active surveillance has surpassed watchful waiting (which has its own MeSH) as the more commonly cited literature term (Fig. 1C). Similarly, robot-assisted prostatectomy has no MeSH indexing, yet is a separate procedure encompassing its own morbidity profile to its open counterpart, which has MeSH indexing. In comparison, laparoscopic cholecystectomy has had individual MeSH indexing since 1993.

The first step in resisting these trends is awareness of the issues. Researchers and editors need to be ever mindful of integrity and relevance in PCa research. Overall, greater attention is required of the language we use in PCa literature and databases such as MEDLINE need to be proactive in this regard. A lack of standardisation has a number of important implications in PCa care, in particular, limiting access to best available evidence and the accuracy of systematic reviews, hindering communication and international collaboration.

Conflict of Interest

Nathan Lawrentschuk, Damien M. Bolton and Declan Murphy perform robot-assisted prostatectomies. Declan Murphy has received honoraria for travel support, advisory board and proctoring of robotic surgery from Intuitive Surgical and Device Technologies Australia.

A lot of questions (and a few answers . . .) in retroperitoneal fibrosis

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Introduction

In 1939, Churchill memorably described Russia as ‘a riddle wrapped in a mystery inside an enigma’ [1]. He could have been talking of retroperitoneal fibrosis (RPF). Now, 109 years after it was first described by Albarran [2], RPF remains an enigma, challenging to diagnose and very challenging to treat. The pathogenesis is uncertain, there is no accepted classification and there are no published guidelines.

Urologists are central to the management of RPF because obstructive renal failure is a common feature, but the best long-term solution for ureteric obstruction is fiercely debated. In essence: who should have ureterolysis? A host of other pertinent clinical questions remain unanswered. Is a biopsy always required? What is an appropriate initial serological screen? Best imaging? Is RPF a basket of distinct diseases with a common endpoint or is there a unifying pathology? Can the disease be cured or only suppressed? What is the basis for the severe pain experienced by some? Do all patients require steroids or is a more selective approach required? In some is the episode of RPF time-limited, eventually ‘burning itself out’? In keeping with other fibro-inflammatory disorders, might the new biological immune suppressors, e.g. rituximab, offer a more targeted approach to disease management? The description of IgG4-related disease in 2003 and its undoubted involvement in some cases of RPF has added further intrigue to the clinical mix [3].

References

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Abbreviations: PCa, prostate cancer; MeSH, medical subject headings.