

Book Review

Cancer Surveys Volume 23: Preventing Prostate Cancer: Screening Verses Chemotherapy

Editors: R.T.D. Oliver, A. Belldgrun and P.F.M. Wrigley

WITH BOWEL cancer and lung cancer declining in young men because of increased consumption of dietary fibre and a reduction in smoking, prostate cancer is becoming the most significant malignant cause of death in terms of rate of increase and numbers after lung cancer. However, most patients present after the age 70 years and most men have some evidence of 'latent' malignant cells in the prostate after death from other causes at the age of 80 years. It has been estimated that 4 of 5 patients treated by radical surgery in the U.S. would not have died of their disease even if they had not been operated on. This has been a major factor in the scepticism of radical treatment of such patients. However, the mortality rate is increasing, and under the age of 65 years just over 1000 men a year are dying in the U.K. Overall, in 1992 in the U.K., prostate cancer was responsible for 72 000 lost years of life compared with 226 000 from breast cancer and 35 000 from cancer of the cervix.

Cancer surveys volume 23, arising out of a meeting organised by the Prostate Cancer Charitable Trust, sets out to refocus attention on the biology of prostate cancer and its treatment. The relative merits of screening versus chemoprevention as long term strategies for reducing deaths was the primary concern of the meeting, and particular attention was paid to the following areas.

When are atypical prostatic cells malignant?

With increasing numbers of markers of malignancy, such as androgen receptor loss, basic fibroblast growth factor, collagenase, mutated oncogenes and deleted suppresser genes, pathologists have better tools to differentiate 'latent' and clinically significant malignancy. Chapters by Bostwick, Isaacs and associates and Chung and Wilding develop this theme and give important new insights into the long latency of the disease with the premalignant lesion appearing to peak in 40-year-olds. Although the steps in progression are becoming better understood, new methods for identifying the high risk cases are not yet available.

Epidemiology

Genetic defects and the possibilities of gene therapy. Although familial cancers are relatively rare, it is increasingly recognized that the discovery of the genes involved in the rare familial cases helps in understanding how to look for those genes that are damaged in tumours arising in patients without a family history. Until recently, prostate cancer was not recognised as one of the

tumours with a genetic component. There are now several reports showing that this has been due to a failure of data collection, because the age of those men who have prostate cancer leads to poor recall of family history. Research is continuing to determine if it is possible to identify target genes whose defects could be corrected by gene therapy, and these efforts are reviewed in the chapters by Isaacs and associates and Chung and Taneja and associates.

Diet, exercise, smoking and other stress related factors and their relevance to immune surveillance preventing the occurrence and progression of prostate cancer. It is now accepted that a substantial proportion of patients with prostate cancer can have long periods of stable disease without tumour progression. Given the undesirable effects of hormone and surgical treatment, there could be considerable benefit from identifying self help factors in patients with slow growing tumours. There is mounting evidence that increasing vitamin A levels, regular exercise, stopping smoking even in non-smoking related cancers and stress relief programmes can slow the progression of some cancers, and that some of this may be mediated via improved immune surveillance. As yet, these issues have not been fully explored in prostate cancer, although the chapters by Key, Sitas and Cuzick review the limited data on these and other epidemiological aspects of the disease, and that of Oliver reviews the limited early data that castration-induced thymic regeneration, acting in an immuno adjuvant way, may provide a rationale to justify further work on intermittent use of hormone therapy.

Venereal disease hypothesis and geographical epidemiology. The limited, mainly negative literature on the human papilloma virus-(HPV) related virology of prostate cancer is reviewed by Cuzick. The parallel escalation of cervical and prostate cancer in Africa, particularly in the setting of the HIV epidemic, provides added interest in exploring the virology of prostate cancer in younger patients in different geographical settings with a high (such as Africa) and low (such as Israel) incidence of cervical cancer. Reports from high and low incidence areas of the world, reviewing these issues, are included in this book.

Clinical trials

Two extremes of view exist with regard to clinical trials, that of the therapeutic nihilist, whose aim is to postpone treatment as long as possible or give treatment intermittently, and that of the active interventionist. In both metastatic disease, covered in the chapters by Smith, Kirk, Oliver and Gallagher, Kehinde and associates, and Rosen and Belldgrun; and primary disease, covered in the chapters by Parkes, Adolfsson, Labrie and colleagues and Schmid; this debate is pursued, and in the chapters by Oliver, Blandy and deKernion and associates, a new agenda for the next decade is developed out of the new understanding of the genetics, dietary and venereal disease hypothesis developed in the earlier part of the book.

R.T.D. Oliver
Imperial Cancer Research Fund
44 Lincoln's Inn Fields
London WC2A 3PX
U.K.