

ACTIVE SURVEILLANCE IN PROSTATE CANCER—ARE WE READY?

Incidence of prostate cancer is increasing throughout the world. In 1853, J. Adams, a surgeon at the London Hospital, described the first case of prostate cancer, “a very rare disease”. 150 years later, prostate cancer has become a significant health problem. Dramatic increase in the number of prostate cancer has several reasons. First of all, prostate cancer was not differentiated from other types of urinary obstruction until the early 1900s. Second, the incidence of prostate cancer increases with increasing ageing population. And third is the adaptation of western lifestyle. Since 1980s, the incidence of small, localized, well-differentiated early prostate cancer is increasing; this is partly due to prostate-specific antigen (PSA) screening and multi-core schemes of prostate biopsy. Now prostate cancer is the most common non cutaneous and second leading cause of death from cancer in the United States. However treatment options for Cancer prostate remains interesting and controversial. Prostate cancer has a varied natural history. Autopsy studies of people dying from different causes have shown that 60-70% of older men have histological prostate cancer (PCa) but Prostate cancer is diagnosed in only 15-20% of men during their lifetime with a 3% lifetime risk of death. A large proportion of these tumors will not progress. Only 16% of men diagnosed with prostate cancer ultimately die of it.

So, questions rose about the benefit of screening, early diagnosis and need for radical treatment and its morbidity. The initial report of the European Randomized Study of Prostate Cancer Screening (ERSPC) reported a 20% lower prostate cancer death rate in the screening group[1]. That is the number needed to treat to prevent a single death from prostate cancer was 48. In other words, 47 men may have been treated unnecessarily to prevent 1 death. Many eminent urologist of this time, including William J Catalona are in favour of early diagnosis and treatment of prostate Cancer through PSA testing[2].

But the finding of an elevated PSA often leads to a biopsy, with attendant risks for complications, followed by unnecessary over treatment and potentially resulting in more lasting complications, such as sexual dysfunction

and urinary incontinence. Studies showing treatment success are also affected by several biases including lead time bias, length time bias, patient selection bias and those may artificially enhance the perceived value of treatment and make the interpretation of studies on treatment outcomes difficult. Recently Richard Ablin, discoverer of PSA made an interesting comment, said routine PSA screening is a hugely expensive public health disaster. And in October 2011 the US Preventive Services Task Force (USPSTF) issued preliminary report, against routine prostate-specific antigen (PSA) testing for the early detection of prostate cancer[3].

So we come across a unique situation where we are picking up most prostate cancers by different form of screening in an early stage and in low grade state and those will never cause any problems and do not need any treatment. On the other hand, some prostate cancers will grow and spread, and become life threatening. Unfortunately, it can be difficult to distinguish between these two types of the disease. To reduce the risk of over treatment, two conservative management strategies have been proposed watchful waiting and active surveillance (AS) The term watchful waiting was coined before 1990 in pre PSA screening era. Watchful waiting referred to the conservative management of PCa until the development of local or systemic progression, given to the patients with limited life expectancy. Palliative treatment is given with transurethral resection of the prostate, to relieve of urinary tract obstruction, hormonal therapy or radiotherapy for the palliation of metastatic lesions. On the other hand active surveillance aims to individualize the management of early prostate cancer by selecting only those men with significant cancers for curative treatment.

The concept of active surveillance was formally described for the first time in 2001 by Richard Chou from Toronto, It includes an active decision not to treat the patient immediately and to follow him with close surveillance and treat at pre-defined thresholds that classify progression. A multicentric clinical trial of AS versus immediate treatment was opened in the USA in 2006 and its results are expected in 2025. Currently criteria

for patient incorporated for AS varies in different series. The Epstein criteria integrate biopsy criteria with clinical data to identify potentially low-risk tumors and are among the most commonly used methods to identify low-risk disease[4,5] and has been used by many centres as inclusion criteria for AS. The latest recommendation by National Institute of Health Care Excellence (NICE) is that the active surveillance should be offered for men with low-risk localized prostate cancer for whom radical prostatectomy or radical radiotherapy is suitable. The protocol recommends measuring PSA levels every 3-4 months in the first year of surveillance, and then at increasing intervals if there is no evidence of disease progression. NICE also recommends considering this protocol for active surveillance as an option for men with intermediate risk localized prostate cancer who do not wish to have immediate radical prostatectomy or radical radiotherapy. NICE also recommends that doctors should consider multiparametric MRI (using T2- and diffusion-weighted imaging) for men with a negative transrectal ultrasound 10-12 core biopsy to determine whether another biopsy is needed. Active surveillance should not, however, be offered to men with high-risk localized prostate cancer

One concern about active surveillance is that men may find it difficult to deal with the knowledge that they have a cancer that is not being treated. However evaluating the prevalence of anxiety and depression in men on active surveillance, by different observer, it appears that men on active surveillance for prostate cancer are no more anxious than those receiving active treatment.

So, while Watchful waiting remains as treatment options for elderly patient with low risk disease. Active surveillance is, new, attractive and increasingly popular approach to the management of early prostate cancer. It aims to individualize therapy by selecting only those men with significant cancers for curative therapy. Here we can remember as Chris Parker said that the prostate cancer is the only human cancer that is curable but which commonly does not need to be cured[6].

Now the question is whether this protocol is practicable in Bangladesh with our limited resource, illiteracy, noncompliance, and unawareness of the disease and its consequence. Although much progress has been made in the field of tissue diagnosis in this country we

have still to go further to raise the standard particularly in the field of tissue sampling by transrectal ultrasound guided prostate biopsy, histopathological diagnosis and tumour grading. We also have to multiparametric MRI in near future for evaluating patient with negative TRUS biopsy. It is also important that patient and their relative should understand the whole situation, particularly need for surgery or radiotherapy anytime in future for those patients kept under active surveillance. This requires proper counseling and record keeping by the physician himself, considering the fact that patient may lose all the documents, they may be lost from follow up and can create a medico legal problem in future. So we must be very conscious about taking the decision to keep a patient on active surveillance to avoid confusion and unnecessary over or under treatment.

Bangladesh J. Urol. 2014; 17(1): 1-2

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Editor, Bangladesh Journal of Urology

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