

COMMENTARY

Fight for men's health: Call of bladder cancer and prostate cancer screening

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A large amount of social surveys and medical statistics both internationally and locally show that men are facing more and more diseases which bring a continuous and serious threat to their physical and mental wellness. In 2015, according to the National Cancer Institute of China, an estimated 3,929,000 (2,151,000 for men and 1,778,000 for women) new cases of cancer have been diagnosed. Specifically, an estimated 80,500 new cases and 32,900 deaths of bladder cancer occurred in 2015, which makes bladder cancer tops the list of urological cancers for Chinese people. In addition, there are also estimated 60,300 new cases and 26,600 deaths of prostate cancers in 2015. Moreover, prostate cancer has become the second most common cancer of urinary system in China^[1]. Consequently, there is no doubt that bladder cancer and prostate cancer have been two leading killers in urinary system; here, we define them as “neo two cancers” with “neo” prefixed to make it distinguished from women's two most common cancers, breast cancer and cervical cancer.

Based on investigation and research, it is found that non-muscle invasive bladder cancer (NMIBC) occupies about 75-85% in new cases of bladder cancer in China. NMIBC has a high recurrence and it needs repeated treatment. Moreover, MIBC accounts for the left 15-25% of new cases for bladder cancer. MIBC is likely to metastasize, and it leads to serious consequences and a poor quality of life^[2]. On the other hand, among all patients of prostate cancer diagnosed in China, localized prostate cancer before metastasis only accounts for one-third, and the left two-thirds has evolved to middle and advanced stage and has already metastasized^[3]. It follows that the current status of diagnosis and prognosis of “neo two cancer” is not good, and their morbidity shall be described as alarming.

With the development of the society, human beings' life of pace has been sped up, and people's physical and psychological health is facing a serious challenge. In China, influenced by traditional ideology, men have been being regarded as the pillar of families, and men are the most significant source of both material and spiritual wealth for families. Therefore, most men, who are considered as the final representative of competitiveness and development potential between families, have been bearing a huge double pressure from work and mind; they will carry on working and ignore risks to their health and safety even in the early stage of various diseases. Moreover, they will not realize until they are broken down by hard work and serious diseases. According to investigation, it is found that quite a few men with “neo two cancers” would not go to hospital and receive a detection unless they have got serious reaction in their bodies. At that moment, their treatment will be very difficult because they have already missed the best timing.

On the one hand, as for the above dilemma, more urologists have advised men to actively participate in the early screening of bladder cancer on account of the increasing incidence rate, high recurrence and metastasis, and long-term monitoring features of bladder cancer. Moreover, early detection can contribute to early treatment. Learning from the experience of Europe and the United States in prostate cancer and also taking the current state of prostate cancer in China into account, more than 20 experts from the Prostate Cancer Working Group in the Genitourinary Cancer Committee, China Anti-Cancer Association

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has established the “Expert Consensus for Prostate Cancer Screening” in 2017, devoting to improve the current diagnosis and prognosis state of prostate cancer patients in China^[4].

It is universally acknowledged that the past few decades have seen the slow development in the detection methodology of “neo two cancer”. Regarding bladder cancer, cystoscope with the character of invasion is the current “golden standard” for its diagnosis. However, cystoscope will bring pains and mental stress for patients. Furthermore, cystoscope costs a lot and it is not so easy to be the universal type for all patients. As for prostate cancer, PSA detection is widely applied to the early screening and monitoring of prostate cancer at the present. Clinically, prostate cancer can only be definitely diagnosed after pathological diagnosis on tissues obtained by biopsy from patients with deviated PSA. However, PSA is only specific to prostate tissues but has no specificity to prostate cancer. Thus, it can be concluded that the current diagnostic method for “neo two cancer” still has room for improvement.

With the goals of improving the diagnosis of “neo two cancers”, perfecting patient experience and benefiting more people, two research teams from Chinese Academy of Sciences and Tsinghua University have innovated and developed detection method for “neo two cancers” which are more precise and friendly. Particularly, Medical Immunodiagnosis Research Center, a subordinate department of Institute of Biophysics, Chinese Academy of Sciences, has developed a non-invasive bladder cancer urine detection method, which is the innovative achievement of Institute of Biophysics, Chinese Academy of Sciences and commented as “the revolutionary breakthrough over the past 40 years in bladder cancer area” by international peers. They have also made a series of bladder cancer test kits, and together with Guyushe, an Internet community, they provide a simple, efficient, and precious non-invasive test method for bladder cancer early screening and post-operative monitoring. In addition, Mass Spectrum Research Team, School of Life Sciences, Tsinghua University, has established a highly sensitive technology to detect prostate cancer based on mass spectrum. They conducted an analytical performance evaluation on the method and established a complete early screening methodology for prostate cancer based on liquid chromatography with tandem mass spectrometry. Furthermore, Medical Immunodiagnosis Research Center and Guyushe have jointly set up the Guyushe Urology Association Council,

which is composed of relevant research organizations and top urologists. The council is the bridge connecting basic research and clinical research of urology. Moreover, it is committed to providing wide, precious, good, economic, and convenient medical service, which will definitely bring benefits to more patients with “neo two cancers”.

With the launch of the blueprint of “Healthy China 2030”, the implementation of the blueprint has been a basic strategy to develop China. On March 5, 2019, the China’s Prime Minister Li Keqiang has pointed out in his government work report that “Millions of Chinese families are suffering from cancers, and we should carry out cancer control action to facilitate cancer prevention, early diagnosis and treatment of cancer, and cancer research with the final goal of comforting Chinese people.” Early screening, early diagnosis, and early treatment are the necessary steps for cancer control, so it will make sense to promote “neo two cancers” screening for men.

For your health and for the happiness of your family, Medical Immunodiagnosis Research Center, Institute of Biophysics, Chinese Academy of Sciences, Mass Spectrum Research Team, School of Life Sciences, Tsinghua University, and together with Guyushe, an Internet community specialized in bladder cancer appeal that all men should engage in “neo two cancers” screening. Meanwhile, we call for support of all the societies to encourage every man around you to take part in the screening. Let’s work together in the “neo two cancers” screening campaign in conjunction to the “Healthy China” strategy.

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