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# Practical Approach for Urological Problems in the Elderly

**Anupan Tantiwong, M.D., FRCS (T)**
*Department of Surgery, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok 10700, Thailand.*

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Urological problem is quite common especially in elderly males. Some problems involve both male and female such as frequent urination, retention of urine, urinary incontinence, hematuria and malignancy. In elderly males, there are some specific conditions such as benign prostatic hyperplasia, prostate cancer, erectile dysfunction and androgen deficiency; all of these are under the care of urologists, but most physicians also have a chance to take care initially and play an important role in prevention and promotion of health. This article will provide a practical approach to urological problems in the elderly which should be useful for general practitioners.

## Voiding dysfunction

The most common voiding dysfunction or LUTS (Lower Urinary Tract Symptoms) in elderly males is BPH (Benign Prostatic Hyperplasia). The prevalence of BPH in Thai community was about 41.3%.[1] The diagnosis depends on symptoms only and other differential diagnosis such as stricture of the urethra and neurogenic bladder should be ruled out. Urinalysis and digital rectal examination are mandatory before treatment. If abnormal urine examination and/or abnormal rectal examination is recognized, urology consultation is recommended.

In symptomatic BPH without bothersome, conservative treatment or watchful waiting is appropriate. In moderate or severe symptomatic BPH without any complication, however, medical treatment with alpha blocker is the most favorable choice. Any kind of alpha blocker, doxazosin, alfuzosin, tamsulosin or prazosin is effective but their side effects or convenience or cost often varies from one to the other.

Five alpha reductase inhibitor especially finasteride is recommended in large BPH because it can reduce the progression of BPH such as acute urinary retention. A combination of alpha blocker and finasteride usually benefits in first 3-6 months of BPH treatment in cases of large gland. When the symptoms do not improve or the patient needs to depend on the drug, otherwise surgical treatment will be needed. Other indications for TUR-P (Transurethral Resection of Prostate), the most popular surgical treatment, are urinary retention, hematuria, vesical stone or recurrent cystitis. Laser prostatectomy is not a standard treatment because of its high cost.

Two urological conditions which associate with BPH and need specific treatments are OAB or overactive bladder and nocturnal polyuria. OAB is characterized by frequency urination and urgency or urgency incontinence. The main pathophysiology comes from detrusor dysfunction and abnormal bladder sensation. So urinalysis and neurological finding should be normal. Behavioral therapy with bladder training and anticholinergic drug such as tolterodine and trospium chloride are the treatments of choice.

Nocturnal polyuria is not uncommon in the elderly of both genders. Urine output during the night should be more than one-third of the total urine output, although patients may try to restrict fluid intake in the evening. Voiding diary is very useful to identify the problem. Antidiuretic hormone plays an important role in the treatment.

## Malignancy

Prostate cancer and bladder cancer are common urological malignancies in the elderly. Early detection of cancer gives the chance of cure and good quality of life. So this is an important role for every physician. DRE or digital rectal examination is the standard physical examination in screening prostate cancer in general population who are older than 50 years. However, PSA screening still remains a matter of controversy. Physicians should describe potential benefits and known harms of screening, diagnosis and treatments. They should listen to the patient's concerns, then individualized the decision to screen especially the elderly males with LUTS and/or family history of prostate cancer.

The chance of prostate cancer depends on PSA level and DRE finding. If PSA is between 4-10 ng/ml and normal DRE the chance of cancer is about 5.6%, but if PSA and DRE are abnormal, the chance of prostate cancer rises up to 43.5%. In the treatment of early prostate cancer, surgery still remains the first choice. Radical retropubic prostatectomy via open or laparoscopic or robotic approach gives a good result with low mortality rate, but laparoscopic approach can offer a short convalescent period with less pain and long-term good quality of

life. The most concerned complications are urinary incontinence and erectile dysfunction after radical prostatectomy.

Because of slow progression of the disease and hormonal dependent cancer, surveillance or hormonal therapy or radiation therapy are also effective alternative in any condition of the disease including patients in advanced stage and high risks. In advanced prostate cancer with bone metastasis, hormonal therapy by bilateral orchiectomy is still the cost effective treatment for Thai people. This kind of simple treatment can relief severe symptom such as bone pain, decrease PSA level and increase quality of life for a period of time. The average survival in this stage is about 1-2 years.

The screening for bladder cancer in the elderly is not a standard recommendation but often in routine check-ups, if microscopic hematuria or more than 3 RBC/HPF is presented at least 2 in 3 times, investigation should be routinely conducted to find out the actual causes. The investigation consists of ultrasonography of the urinary tract, IVP and cystoscopy. Through this approach, early bladder cancer is detected and treated with transurethral resection. Also, microscopic hematuria in yearly routine check up can disclose early renal cancer by investigation with ultrasonography.

## Sexual dysfunction

ED or erectile dysfunction is the most common sexual dysfunction in elderly males. The prevalence in Thai men age 40-70 years was 37.5% and increases with age.[2] But in the high risk group especially cardiovascular patients such as DM, hypertension and heart disease, the prevalence increases up to 60-70%. So the physicians who take care of these patients should be aware, and try to identify the patients and advice the way to solve the problems. The diagnosis is simple as it follows the definition of ED which is unable to obtain or maintain erection sufficiently to satisfy sexual performance. The necessary investigation is in order to identify the hidden risk factors. So blood pressure, fasting blood sugar, lipid profile and sometime testosterone level should be evaluated before starting treatment.

The impact of ED is often greater than we expect: ED affects holistic health, physical, mental, social and spiritual health especially it disturbs the couple or family life. In ED treatment, a few important key success factors are good communication and good cooperation between the patient-couple and the physician. Oral therapy is the first line therapy. Three drugs in PDE-5 inhibitor group are standard treatment. Sildenafil was the first and reliable one; Vardenafil was potent especially in difficult case; Tadalafil was a long acting one. We can start the treatment with the most preferable one and should change to another one if the previous one failed. We should assure that the patients had enough sexual stimulation and enough waiting time before starting sexual intercourse. The only one contraindication for PDE-5 inhibitor is nitrate administration but the fitness for sex should be evaluated in unhealthy patients especially in cardiovascular patients. Finally, we should stimulate the patients to set priority of treatment goal for good sexual relationship not in sexual intercourse.

## Androgen deficiency

In the elderly, sex hormone deficiency is another problem which changes both the quantity and quality of life. In male, androgen or testosterone level decreases slowly, approximately 1% per year after the age 50 years. So the prevalence of androgen deficiency or we call LOH (Late Onset Hypogonadism) or PADAM (Partial Androgen Deficiency in Aging Male) is low. Before starting hormone replacement therapy (HRT), we should confirm the diagnosis by symptoms and hormone level. Clinical features of PADAM are: diminished sexual desire and erectile quality, particularly nocturnal or morning erection, changing in mood, fatigue, decrease in lean body mass, increase in visceral fat and decrease in bone mineral density. Testosterone level should be less than 350 ng/dl in the morning at least 2 times. The contraindications for testosterone supplement are: PSA level higher than 4.0 ng/dl or abnormal digital rectal examination or polycytemia or severe cardiac insufficiency. The practical form of HRT is the oral form of testosterone undecanoate 120-200 mg daily, or testosterone injection every 1-3 months.

## CONCLUSION

Finally, screening and promotion of men's health especially in the elderly can prevent these problems. Primary prevention by risk reduction, lifestyle modification, diet supplements and chemoprevention can reduce the risk of ED, prostate cancer or bladder cancer. Long-term use of finasteride can reduce risk of prostate cancer by 24.8% in 7 years. Secondary prevention is early diagnosis and treatment. Although screening of prostate cancer in general population is not cost effective in Thailand, but in individuals we should do screening not only for prostate cancer but also other urological cancer as well as BPH, ED and LOH. If all physicians are aware of urological problems and try to prevent these problems or promote health in the aging, the elderly in Thailand will have good health in the near future.

## REFERENCES


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