

Dr. Bang-Ping Jiann: PDE5 inhibitors in erectile dysfunction

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The 2016 Huaxia Medical Forum—Genitourinary Tumor & The 2016 Greatwall International Translational Andrology and Urology Forum (GUT-HMF 2016 & GITAU 2016) was held at the Tianjin Convention Center in Tianjin, China from April 15–17, 2016. We are honored to invite Dr. Bang-Ping Jiann for an interview after his speech on “Penile rehabilitation with PDE5 inhibitors in men after nerve-sparing radical prostatectomy”.

Dr. Bang-Ping Jiann (*Figure 1*) is Professor of National Yang-Ming University, Taipei, Taiwan and Director of Division of Basic Medical Research, Department of Medical Education and Research, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan. Dr. Jiann is Vice-President and Deputy Director of the committee on male sexual dysfunction, Asian Association of Andrology. He is associate editor for the *Sexual Medicine* since 2012 and editorial member for the *World Journal of Men's Health* since 2014. Dr. Jiann has also published over 100 original researches and invited review articles in peer-reviewed international medical journals and 10 book chapters.

TAU: *Why post-radical prostatectomy erectile dysfunction remains a challenge for the urologist as we have made great improvement in surgical technique?*

Dr. Jiann: During a prostatectomy, a surgeon tries to preserve the surrounding nerves as much as possible, so called nerve-sparing prostatectomy. But some degree of nerve damage inevitably occurred during intraoperative procedure and a substantial portion of patients have to suffer from postoperative erectile problem. The success of penile rehabilitation may depend on how much nerve damage results from surgery. Besides, other risk factors may influence outcome including preoperative erectile function, patient age, body weight, smoking status, and comorbidities. Having adjunctive treatments, such as radiation or hormonal therapy, may affect the outcome of penile rehabilitation. A recent systematic analysis of prospective randomized trials on penile rehabilitation showed that the rate of undisturbed erection function falls in the range of 20–25% and these



Figure 1 Dr. Bang-Ping Jiann.

rates have not substantially improved or changed over the past 17 years, from 2003 to 2010.

TAU: *Could you briefly review the role of PDE5 inhibitors in penile rehabilitation program?*

Dr. Jiann: PDE5 inhibitor is considered an ideal agent for use in penile rehabilitation program not only because of its easy administration but also its potential benefits in function preservation. PDE5 inhibitors elevate levels of cyclic guanosine monophosphate in cavernosal tissue that protects cavernous tissue against apoptosis and fibrosis. Additionally, PDE5 inhibitors can promote endothelial protection, improve endothelial function, and recruit endothelial progenitor cells. The efficacy and safety of PDE5 inhibitors for the treatment of ED after nerve-sparing radical prostatectomy has been extensively studied. The existing evidence does not support the optimal rehabilitation program, such as daily dosing or on-demand use and duration of rehabilitation after its commencement. However, those PDE5 trials were criticized that did not target the right candidates for trials. Further studies are

still needed to clarify the role of PDE5 inhibitors in penile rehabilitation after prostatectomy.

TAU: What are the current strategies used for penile rehabilitation?

Dr. Jiann: Despite a great number of controversies still exist in the program of penile rehabilitation, evidences suggest a beneficial role for penile rehabilitation in improving return of potency. Followings are some current strategies:

- (I) Rehabilitation in any form and treatment are undoubted better than leaving the erectile tissue in its unfavorable fate and should start as early as possible;
- (II) Postoperatively early treatment may facilitate better long-term results in terms of erectile function recovery and erectile dysfunction treatment possibilities;
- (III) Young patients with good preoperative erectile function may experience good erectile function recovery rates even without any treatment after prostatectomy; using PDE5 inhibitors may facilitate postoperative recovery of erectile function.

TAU: Treatment optimization with PDE5 inhibitors for erectile dysfunction (ED)

Dr. Jiann: PDE5 inhibitor is recommended as the first-line treatment for ED. Optimizing treatment with PDE5 inhibitors is very important in clinical practice. Followings are ten suggestions for optimization:

- (I) Sildenafil and vardenafil should be taken 30–60 minutes before sexual intercourse and tadalafil at least 2 hours before;
- (II) Do not take sildenafil or vardenafil with a high-fat meal. Although alcohol might not interact with the drugs, excessive intake of alcohol should be avoided as it will interfere with sexual

performance;

- (III) Titrate the dose properly. Encourage patients to try sildenafil 100 mg, vardenafil 20 mg or tadalafil 20 mg if a lower dose does not provide satisfactory result and there is no intolerable side effect;
- (IV) Emphasize the need for visual and physical sexual stimulation for the drug to take effect;
- (V) Patients should be encouraged not to give up before at least four attempts using the maximum tolerated dose along with adequate sexual stimulation has been tried.
- (VI) Comorbidities, such as hypogonadism, hypertension, diabetes mellitus and dyslipidemia should be corrected and well controlled;
- (VII) Follow-up visits are essential for the best possible treatment outcome;
- (VIII) About 10% of patients may develop mild and transient side effects, such as headache, flushing, nasal congestion and dyspepsia;
- (IX) Patients' partner should be invited in the treatment discussion and assessing treatment response whenever possible;
- (X) Patients who are using nitrates, either short- or long-acting should not take any of the PDE5 inhibitors.

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Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

(Science Editor: Lucine M. Gao, TAU, tau@amepc.org)

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