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AB040. The effects of nicotine- and tar-free cigarette smoke extract on plasma testosterone level and erectile function in rats

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Objective: To evaluate the effects of nicotine- and tar-free cigarette smoke extract on plasma testosterone level and erectile function in rats.

Methods: Thirty male Sprague-Dawley (SD) rats were randomly divided into 3 groups (n=10): the control group (PBS group), fCSE group and antioxidant group (CSE + GSH group). After 8 weeks, by electrostimulating of the cavernous nerve, maximal intracavernous pressure (MICP), mean arterial pressure (MAP), ICP/MAP, Tmax (the time of stimulating MICP happened), cavernosal filling rate (CFR) were measured with radioimmunoassay to evaluate the erectile function of rats; the levels of plasma testosterone (T) were measured with radioimmunoassay, the activity of superoxide dismutase (SOD), MDA, NOS, from cavernosal tissue homogenate was measured. To observe the morphological changes of corpus cavernosum tissue by Masson staining

Results: Compared to the control group [T (5.37±1.43) µg/L, NOS (2.90±0.27) U/mg, SOD (18.41±1.09) U/mg prot], fCSE group [T (3.22±1.11) µg/L, NOS (1.67±0.18) U/mg, SOD (13.36±1.18) U/mg prot] decreased obviously. About index of erectile function, compared to the

control group [MICP (85.92±6.36) mmHg, MICP/MAP (0.86±0.09) and CFR (2.14±0.44)], fCSE group [MICP (58.99±10.76) mmHg, MICP/MAP (0.56±0.08), CFR (0.89±0.44)] decreased obviously; and Tmax [(29.90±5.78) vs. (42.90±8.56) s] delayed obviously, and the levels of T were positively correlated with CFR (r=0.364, P<0.05). Compared with the control group, Masson staining showed that fCSE group of the fiber about corpus cavernosum smooth muscle tissue/collagen fiber decreased obviously [(+0.27 0.04) vs. (0.98±0.12)]. Antioxidant group could improve index of erectile function, but there was no obvious effect in improving the ratio of the corpus cavernosum smooth muscle tissue/collagen fiber

Conclusions: The decrease of nicotine- and tar-free cigarette smoke extract on plasma testosterone level and erectile function in rats was related to oxidative stress, Antioxidant therapy could improve erectile function, but it was limited in protecting penis organization.

Keywords: Nicotine- and tar-free cigarette smoke extract; maximal intracavernous pressure (MICP); oxidative stress; plasma testosterone

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AB041. Evolution of PDE5 inhibitors in Korea

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Abstract: After launching of Sildenafil Citrate, the last invention of 20th century, in 1998, oral PDE5 inhibitor has been established as first line treatment of erectile dysfunction (ED) and shift new paradigm of diagnosis and treatment of ED. The big success of sildenafil in pharmaceutical R&D induced the consecutive development

of the so-called 'The second viagra', e.g., Tadalafil and Vardenafil in 2003. Currently, these 3 kinds of PDE5 inhibitors are most famous and well-known PDE5 inhibitors worldwide. In Korea, another 3 kinds of PDE5 inhibitors, Udenafil (2005), Mirodenafil (2007) and Avanafil (2011) have been developed and 6 kinds of PDE5 inhibitors were used in the competitive market. In last 10 years, the evolution of PDE5 inhibitors competition has changed the dosage concept from on-demand to daily low-dose and applied for other indications beyond ED such as pulmonary hypertension in Sildenafil, and BPH/LUTS in Tadalafil and penile rehabilitation with daily low dose. For the preparations of PDE5 inhibitors, the termination of Korean patent of sildenafil in 2012 released 4 preparations of PDE5 inhibitors, tablet, oro-disposable film, granule and chewable of 60 generic Sildenafil from 49 companies. The oro-disposable film and chewable are favorable from patients. In Korea, patent of Cialis will be terminated in near future and the development of generic drugs like Viagra will go in the right way and as expected. The long half-life of Tadalafil enabled the approval for BPH/LUTS with daily low dose usage. In turn, the generic Cialis also will be developed as various preparations including oro-disposable film and as combination with antihypertensive for ED/HT, PDE5 inhibitor with alpha blockers for ED/LUTS and PDE5 inhibitor with antidepressant for ED/PE. The present lecture review the evolution of PDE5 inhibitors from the development of sildenafil citrate in 1998 to combination in 2015, Korea.

Keywords: PDE5 inhibitor; erectile dysfunction (ED); LUTS; PE

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AB042. The prevalence of sexual disorders in Tashkent (Uzbekistan)

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Objective: To identify the appeal ability of patients with sexual disorders among various layers of men of Tashkent.

Materials and Methods: Interviewed 3,216 respondents of men who applied in 7 central clinics in the city of Tashkent. We studied the following parameters: presence or absence of premature ejaculation (PE) by using a dichotomous scale-(yes/no) with a single question asking if ejaculation occurred too early, as well as defining form of PE through the use of an additional item ("Have you experienced early ejaculation from the very first days of your sexual life?"). Moreover we investigated intravaginal ejaculatory latency time (IELT). Because of it has a significant direct effect on perceived control over ejaculation. The presence of erectile dysfunction (ED) was also to sort out by dichotomous scale. For determine severity of ED we used the questionnaire IIEF-5, for PE-IELT.

Results: The mean age of the respondents was 34.49±10.29 (from 19 to 63 years), the mean duration of intravaginal latency time of all men was 7.51±6.82 (0.07 to 50) minutes. Respondents with sexual disorders were 1,254 (39%). Among of this data, with PE were 482 respondents (38.4%), with ED were 382 (30.5%) and a combination of PE and ED was 390 (31.1%). Disease duration respondents who noted PE ranged from 1.5 to 7 years, average 4.43±1.55 years. However, 708 of them do not sought treatment, the average duration was 4.4±1.54 years. In the Multicounty Concept Evaluation and Assessment of PE (MCCA-PE) study, the self-reported time taken for an average man to ejaculate varied greatly from 7 to 14 minutes (Montorsi, 2005). These figures were highly geography dependent, being shorter in Germany (7 minutes), longer in the United States (14 minutes), and average in England, France, and Italy (10 minutes). In compare with undergone data, our study shows that average of IELT in Tashkent (7.51 minutes) among 3,216 respondents.

Conclusions: It became clear that men with PE did not appeal for treatment in time. This interval time by our