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THE PERIPHERAL EFFECT OF DOPAMINE ON CONTRACTION OF RAT SEMINAL VESICLES IN VIVO REGULATION AND ORGAN BATH STUDY

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Purpose: To investigate the peripheral effect of dopamine on contraction of rat seminal vesicles, including in vivo regulation and organ bath study.

Materials and Methods: To examine in vivo regulation, a polyethylene catheter (PE-50) was placed in the lumen of the rat seminal vesicles to record the intra-luminal pressure change. Dopamine and the test drug was administered through a catheter running from the femoral artery to the ligation of the common iliac artery. Phasic tone (mmHg) of the maximal seminal vesicle contractile response induced by intra-arterial injection of dopamine was used as the control. The seminal vesicle contractile responses to dopamine after pretreatment of blocking agents and antagonists were obtained and compared with the control. For organ bath study, dopamine HCl (DA, 10^-5 to 3 x 10^-4 M) was added with various concentrations into organ bath to induce isometric contraction of the isolated rat seminal vesicles. The dose response curve of the isolated rat seminal vesicles reacting to dopamine and the inhibitory dose response curve to dopaminergic antagonists (Ro+SCH-23390, S(-)-salipuride) were depicted.

Results: Pressure within the seminal vesicles of the Wistar rats increased significantly after intra-arterial injection of dopamine. The maximal mean phasic tension was 6.3 ± 4.1 mmHg when 1 nM/kg dopamine was injected. Pretreatment with haloperidol, SCH 23390, and domperidone at the doses sufficient to block dopaminergic receptors significantly inhibited the dopamine-induced contraction of rat seminal vesicles. These findings suggest the existence of functional dopaminergic receptors in rat seminal vesicles. Pretreatment with guanethidine also significantly inhibited the dopamine-induced contraction of rat seminal vesicles. Norepinephrine mediation of the dopamine-induced contraction of rat seminal vesicles was further supported by the findings that prazosin (1 nM/kg) and WB-4101 (1 nM/kg) both significantly impeded the maximal contractile response. In the organ bath study, dopamine could achieve good contraction of rat seminal vesicle, especially with the phasic phenomenon. The IC50 of Ro+SCH23390 was similar to that of S(-)-salipuride. And a calcium channel blocker, nifedipine could also inhibit the contraction of rat seminal vesicles.

Conclusion: Contraction of rat seminal vesicle involves dopaminergic receptor regulation. Mediation of norepinephrine in dopamine-induced contraction of rat seminal vesicle is also suggested. The predominant subtypes of dopaminergic receptors on rat seminal vesicle are D2 and D1.

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THE EFFECT OF PLATELET RICH FIBRIN ON CAVERNOUS NERVE REGENERATION IN A NERVE INJURY RAT MODEL

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Objectives: To assess whether platelet rich fibrin (PRF) have therapeutic effects on cavernous nerve (CN) regeneration.

Materials and Methods: Twenty-four 12-week old male Sprague-Dawley rats were used in this study. These animals were randomly divided into four groups: Group 1 underwent sham operation, while three groups underwent bilateral CN crush. Three crush-injury groups were treated at the time of injury with an application of PRF or platelet-derived growth factor (PDGF) or normal saline only on the site of injury, respectively. Erectile function was assessed by CN electromasturbation at 4 weeks. Penile tissue and CN were collected for histology.

Results: Four weeks after surgery, in the group that underwent bilateral nerve crush with normal saline, the functional evaluation showed a lower mean maximal intracavernous pressure (ICP) than that in the sham group. Both PRF and PDGF treatments resulted in significant recovery of erectile function of erectile function, as compared with normal saline treatment. Histologically, the groups with the treatment of PRF and PDGF had significantly less fibrosis and a significant preservation of myelinated axons of CNs compared with injured controls.

Conclusions: The application of PRF and PDGF to the site of CN crush injury can improve recovery of erectile function and facilitate nerve regeneration in a rat model.

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WHAT DO MEN KNOW ABOUT THEIR SEXUAL HEALTH?—A QUALITATIVE STUDY IN "GEN X AND Y"


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Purpose: Generation X (Gen X) is the group of people aged ranging from 30 to 44 years, who face an uncertain, ill-defined future. Generation Y (Gen Y), on the other hand, are people aged 19 to 29 years, with an increased use and familiarity with communications, media, and digital technologies. With the difference in outlook and skills, it is unclear if their views on sexual health differ. This study aimed to explore the knowledge and attitude about sexual health among Gen X & Y men.

Methods: This study used the qualitative methodology. It was conducted at an urban area of Malaysia in 2009/2010. Men were sampled purposively based on the age, ethnicity and educational background. Trained facilitators conducted 10 focus group interviews with men from generation X (n = 54) and 12 from generation Y (n = 69) using a semi-structured interview guide. The interviews were audio-recorded, transcribed verbatim and checked for accuracy. Two researchers analyzed the transcripts independently by extracting and agreeing on the emerging themes before converting them into nodes for coding across the 22 transcripts. NVivo 9 was used to manage the data.

Results: Men from both Generation X and Y feel sexual health are very important in maintaining relationships. Gen X men perceive having normal or satisfying sexual relationships boost their confidence, life and work performance. Nevertheless, they are unable to define normal sexual health. Men do not share sexual problem with their sexual partners but may discuss it with their male friends. Most Gen X and few Gen Y men have heard and knew about erectile dysfunction (ED). Most men from both generations know very little about premature ejaculation (PE) and they generally are confused with the symptoms and consequences of ED and PE. Gen Y men are concerned about sexually transmitted infections.

Conclusion: Men of Gen X and Y agreed sexual health are important but many are still unsure what normal sexual health is. They are unsure about premature ejaculation and confused about the difference between erectile dysfunction and premature ejaculation.