[Research Note] The Effect of IV-injected Kisspeptin on Blood Concentrations of LH in Neutered Dogs

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ABSTRACT Kisspeptin, a product of KiSS-1 gene, also known as metastin, can be degraded into several derivatives including kisspeptin-14, kisspeptin-13 and kisspeptin-10. These derivatives are also called kisspeptins. Kisspeptin can be detected in many organs including the embryo, liver, intestine, pancreas, spleen and peripheral lymphoid tissues in different kinds of animals. It has been discovered that kisspeptin regulates the growth and metastasis of tumor cells when conjugates with its GPR 54 receptor on the cell membrane. Recently, it has also been stated that kisspeptin regulates reproductive endocrine productivity. Ovine and bovine research showed that IV-injected kisspeptin significantly stimulated the release of follicle stimulating hormone (FSH) and luteinizing hormone (LH). In order to realize the effect of kisspeptin on LH change, neutered dogs were given intravenously and serum LH concentrations were then measured at different time points. The results showed that 25 ng/kg of kisspeptin induced LH secretion effectively and resulted in an elevation in blood LH concentration. Continual injection of the same dose of kisspeptin also showed a time-course effect with continually elevated LH concentration. The results suggest that kisspeptin possesses a positive function in regulation of gonadotropin secretion in dogs. [Cheng CH, Chou CH, Hsu MC, Chen BH, Fan YC, * Chiu CH. The Effect of IV-injected Kisspeptin on Blood Concentrations of LH in Neutered Dogs. Taiwan Vet J 37 (2): 136-142, 2011. * Corresponding author TEL: 886-2-3366-4161, FAX: 886-2-2732-4070, E-mail: chiuchihhsien@ntu.edu.tw]

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