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KOUMKRIT PISETPAISAN: MICROANGIOARCHITECTURE OF SEMINAL VESICLE AND PROSTATE GLAND IN COMMON TREE SHREW (*Tupaia glis*). THESIS ADVISORS: REON SOMANA, M.D., Ph.D., WICHAI EKATAKSIN, M.D., Ph.D. PANJIT CHUNHABUNDIT, Ph.D., WISUIT PRADIDARCHEEP, Ph.D. 106 p. ISBN 974-664-731-8

This study was aimed at elucidating the blood supply system to the seminal vesicle and the prostate gland in the common tree shrew (*Tupaia glis*). Eighteen male common tree shrews weighing between 110-190 g were used. Their seminal vesicles and prostate glands were prepared for studying with LM and with corrosion cast technique. It was found that the seminal vesicle and prostate glands were supplied by branches of the anterior division of the internal iliac artery. This artery also supplies the pelvic visceral organs. The anterior division of intenal iliac artery gives off three main branches. The first one is the superior vesical artery which gives off five branches to supply urinary bladder, ureter, vas deferens, urethra and finally it courses to the medial side of the seminal vesicle to become the seminal vesicle artery. The second branch of anterior division of internal iliac artery is the inferior vesical artery which gives off five to seven branches. Five to six branches supply the dorsal and ventral surfaces of the distal portion (glandular acini region) of the gland and continue to the intermediate section of the ducts and finally supply the proximal portion of the prostatic ducts adjacent to the prostatic urethra. The remaining branches supply the prostatic urethra and membranous urethra. The third branch of the anterior division of internal iliac artery is internal pudendal artery. The first and the second branches from the anterior division of the internal iliac artery, usually anastomoses with one another, are called the marginal branch of superior vesical artery. This branch gives off several arterioles to supply the greater curvature and the posteromedial side of the seminal vesicle and the rostral region of the anteroventral lobe of the prostate gland. The penetrating arterioles terminate as capillary network. The capillaries supplying the seminal vesicle and prostate gland are without fenestration. The veins from the two glands usually accompany the arteries. The interconnections between veins are usually found in both of seminal vesicle and prostate gland. These veins open into the internal iliac vein before joining the external iliac artery to form the inferior vena cava. The pattern of blood supply of the prostate gland in the common tree shrew is quite similar to that of human but somewhat different from that of rat. The blood supply to the ventral prostate in rats appears as a single trunk with the base near the proximal portion of the prostatic duct adjacent to the prostatic urethra. These vessels eventually branch out into smaller vessels, at the intermediate section of the duct, most of which continue to the distal part (the glandular acini) where they supply the distal region of the prostatic duct and the glandular portion.