Ultrasonographic dimensions of normal Great Dane male dogs sex organs

Medidas ultra-sonográficas do aparelho reprodutor de cães da raça Dogue Alemão

Silvia Edelweiss Crusco dos Santos1*, José Fernando Garcia1, Camila Infantosi Vannucchi2, André Luiz Louzada Maldonado3, Flávio Augusto Marques dos Santos1

1 Curso de Medicina Veterinária FOA-UNESP - Araçatuba - LBBMA, Rua Clóvis Pestana, 793 Araçatuba - SP - Brasil - CEP 16050-680
2 Departamento de Reprodução Animal FMVZ-USP, Av.Prof. Dr.Orlando Marques de Paiva, 87 - São Paulo - SP CEP: 05508-900
3 Universidade de Santo Amaro UNISA-SP, R. Prof. Enéas de Souza Neto, 340 - São Paulo - SP CEP 04829-300

1*, José Fernando Garcia, André Luiz Louzada Maldonado, Flávio Augusto Marques dos Santos

1* Correspondência: telefone/fax: (18) 3636-3286
e-mail: silviacrusco@terra.com.br

Summary: The aim of this study was to measure in vivo Great Dane dogs testicular, epididymal and prostatic ultrasonicographic dimensions. For this purpose, examinations of the sex organs of forty seven males were done using an Aloka SSD-500 portable ultrasound unit with a 7.5 MHz dynamic B Mode real time transducer. Testicles measurements were: length 4.28 cm (± 0.64), width 2.74 cm (±0.57) and volume 16.97 cm³ (±16.43). Epididym tail widths were tail 0.67 cm (±0.16), body 0.59 cm (±0.12) and head 0.57 cm (±0.15). Prostate length was 4.04 cm (±0.91), width 4.00 cm (±0.91) and volume 30.10 cm³ (±20.33).

Key words: canine, testicle, epididym, prostate, ultrasound imaging

Resumo: O objetivo deste estudo foi medir in vivo as dimensões dos testículos, epidídimos e próstata de cães da raça Dogue Alemão. Para tal, o exame ultra-sonográfico dos órgãos sexuais de 47 cães machos foi realizado, utilizando-se um aparelho portátil Aloka SSD-500 com transdutor de 7,5 MHz Modo B em tempo real. Os testículos tiveram média de comprimento 4,29 cm (± 0,64), largura de 2,74 cm (±0,57), e volume 16,97 cm³ (±16,43). Epídymis widths were tail 0.67 cm (±0.16), body 0.59 cm (±0.12) and head 0.57 cm (±0.15). A medida média da próstata foi 4,04 cm (±0,91) de comprimento e 4,00 cm (±0,91) de largura, sendo o volume de 30,10 cm³ (±20,33).

Palavras chave: cão, testículo, epididimo, próstata, ultra-sonografia

Ultrasonography has become the modality of choice for nondestructive, nonionizing imaging of the reproductive system (Root & Spaulding, 1994). Ultrasonographic examination is critical for patients with suspected changes in the testes, epididymis or prostate and helps clinicians to obtain the exact diagnosis of pathological conditions (Ellington, 1994). Therefore, the contribution of this work is to establish testicular, epididymal and prostatic dimensions for Great Dane breed.

Forty seven adult, intact, Great Dane, with minimum of 1.5 and maximum of 6 years of age, without clinical or reproductive diseases, were used. All of them were housed in the same kennel and received commercial food and water ad libitum. Ultrasonographic measurement was performed using an Aloka SSD-500 ultrasound with a 7.5 MHz dynamic B Mode real time transducer. With the dogs in lateral position, and after the gel distribution between the scrotal skin and the transducer, the testicles and epididymis were scanned in sagittal plan. The prostate was evaluated in transverse and sagittal transabdominal ultrasonography. Testicular volume was predicted using the prolate espheroid formula V = L x W² x 0.5236, where V= volume, L= craniocaudal and D= dorsoventral measurements (Bailey et al., 1998). The prostatic volume was obtained using the formula V= [(1/26 L x W²) + 1.8 (Kalmopatana et al., 2000). Paired t-test procedures were used to compare measures of left and right testicles and epididymis. There were no significant difference between left and right testicles (p>0.05) and epididymis (p>0.05) measurements, because of if they were considered as a whole.

The testicles, epididymis and prostate dimensions in mean ± SD were: testicles length 4,29 (± 0.64) cm, width 2.74 cm (± 0.64) and volume 16,97 cm³ (±16.43); epididym tail 0.67 (± 0.16), body 0.59 cm (± 0.12) and head 0.57 (± 0.15) and prostate length 4.04 cm (± 0.91), width 4.00 cm (± 0.91) and volume 30.10 cm³ (± 20.33).

There are no reference values for ultrasonographic examination of the reproductive values in each one of the canine breeds, especially considering the significant average sizes between them. Measurement of the male reproductive organs was once performed manually or with special rulers. The use of ultrasonicographic examinations made it possible to determine testicular, epididymal and prostatic length and width more accurately (Root & Spaulding, 1994). The results provide useful clinical guidelines. However, there is a significant difference between the body weights of all dog
breeds, which makes it difficult to establish a pattern for the size of reproductive organs. Therefore, these data provide guidelines for measurements of the testicles, epididymis and prostate of Great Dane dogs.

References


