

## **Dedication**

This work is dedicated to our families specially our parents who believed in the importance of education. It is also dedicated to our friends (especially Esraa Mohammed, Ahmed Fadul and Mohammed Amin).

## **Acknowledgement**

Our thanks and gratitude to Almighty Allah for giving us strength to accomplish this work. It is with immense gratitude that we acknowledge the support and help of our supervisor Dr. Rihab Mohamed Abdelghafar Osman; we consider it an honor to work under supervision of her. We wish to thank, first and foremost, Professor Shadia Abdel Atti Omer for doing the statistical analysis and Dr. Areeg Mohamed Almubarak for her endless help. We are also indebted to Hussam Aldeen obied and the animal owners for their help and cooperation..

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## Abstract

The study material consisted of 30 clinically healthy female Saanen goats. Their ages were between 6 months- 8 years and with body score between 2-4. Ultrasound scanning was performed to measure the normal length, width, cortex and medulla of both kidneys.

Real-time scanner (Pie Medical Easote, The Netherlands) equipped with switchable frequency (3.5-5) MHz curvilinear probe was used while the animals were non-sedated on the standing position. Liberal amounts of ultrasonic gel were applied prior to the scanning for exclusion of air. Longitudinal views of the kidneys were taken while the probe was held parallel to the vertebrae. Measurements of cortex and medulla were performed on the same image in which the length measurements were made. The length, width, cortex and medulla of the right kidney were found to be  $7.0 \pm 0.64$  cm,  $3.8 \pm 0.49$ cm,  $1.03 \pm 0.31$  cm and  $1.75 \pm 0.32$  cm respectively. The length, width, cortex and medulla of the left kidney were found to be  $6.90 \pm .63$  cm,  $3.80 \pm .84$  cm,  $1.00 \pm .32$  cm and  $1.8 \pm .38$  cm respectively. No significant differences were found between the measurements of the right and left kidney.

Key words: Ultrasound, kidney, Saanen goat, normal measurements

## ملخص الاطروحة

أجريت هذه الدراسة علي عدد 30 ماعز من اناث سلالة السعانيين سليمه و كانت اعمارهم ما بين 6 شهور -8 سنوات و التقويم العام للجسم يتراوح ما بين 2-4. تم إجراء مسح بالموجات فوق الصوتيه لقياس الطول والعرض والشرة والنخاع لكلا الكليتين. تم استخدام مجس ذو سطح منحنى وذا تردد يتراوح بين 3.5-5 ميغاهرتز حيث ان الحيوانات كانت غير مخدره وعلني وضعية الوقوف. تم وضع ماده هلاميه قبل المسح بالموجات فوق الصوتيه لإستبعاد الهواء ومسحت الكلى بالمقطع الطولي موازيه للفقرات القطنيه واجريت قياسات اللحاء والنخاع على نفس الصورة التي اجريت فيها قياسات الطول. وجد ان قياسات الطول, العرض, النخاع والقشرة للكلى اليمنى  $0.64 \pm 7.0$  سم,  $0.49 \pm 3.8$  سم,  $0.31 \pm 1.03$  سم,  $0.32 \pm 1.75$  سم على التوالي. وللكلية اليسرى  $0.63 \pm 6.90$  سم,  $0.84 \pm 3.80$  سم,  $0.32 \pm 1$  سم,  $0.38 \pm 1.8$  على التوالي. تبين أنه لا توجد فروقات بين الكلى اليسرى واليمنى في جميع القياسات.

**كلمات مفتاحية: الموجات فوق الصوتيه، الكلى، ماعز السعانيين، قياسات طبيعية**

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