Reproductive ultrasonographic imaging in the male Harbor seal
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Introduction

Harbor seals (*Phoco vitulina*) are northern hemisphere phocids with a pupping season from May to July. During part of the captive breeding program at the Oregon Coast Aquarium, the reproductive organs from a male Harbor seal were examined ultrasonographically on three occasions. The research goals were to describe the ultrasonographic appearance of the phocid testes and prostate as well as to compare seasonal changes in size from April to August 2009. The hypotheses were that the ultrasonographic appearance of the reproductive organs in the Harbor seal would be similar to that of the male dog (a domestic carnivore with other reproductive similarities) and that there would be a seasonal increase in reproductive organ size.

Materials and methods

"Q", a ten-year-old captive-born male Harbor seal with no previous fertility information was trained to roll into dorsal recumbency to permit ventral transabdominal ultrasonographic examinations. A Sonoace Pico (Medison Co., Ltd, Seoul, Korea) with a 3.5-5 MHz convex sector probe was used and digital images were captured. Length and width of the testes and prostate were measured using internal calipers. Mean prostatic size was determined by averaging both the length and width measurements; whereas mean testicular size was determined by averaging both the length and width measurements of both testes. One-way ANOVA was performed using GraphPad Prism® (version 4.00 for Windows, GraphPad Software, San Diego, CA) to compare change in testicular and prostatic size between April and August.

Results

The phocid testes had a homogeneous, medium echotexture with a thin hyperechoic peripheral echo. The prostate was moderately echogenic with hypoechoic regions dorsally and ventrally. The prostate capsule was clearly defined dorsally and ventrally but not laterally. Although there was a subtle increase in average prostate size and decrease in average testicular size over time, this change was not significant (Figure 1; *P*>0.60).

Conclusion

This is the first report describing reproductive ultrasonography in a male phocid. The testicular and prostatic echotexture was similar to what has been reported in dogs.

Keywords: Harbor seal, *Phoco vitulina*, prostate, testis, ultrasonography

Figure 1. Mean (SD) reproductive organ size during the breeding season in a male Harbor seal.

References