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RADIOGRAPHIC AND ULTRASONOGRAPHIC FEATURES OF HEMIPENES IN SNAKE SEX DETERMINATION

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INTRODUCTION

Ultrasonography is considered a good method in the identification of the hemipenes (1). the purpose of this paper is to characterize the ultrasonographic and radiographic features of the hemipenes in male snake and to discuss the two diagnostic imaging modalities for their identification.

MATERIALS AND METHODS

a group of 14 snakes identified male by means of ultrasonography (US) were considered. the snakes were then examined radiographically. Ultrasonographic and radiographic features of hemipenes were discussed. A 10 MHz linear transducer was considered, performing longitudinal, transverse and dorsal scans. Radiographic visualization of hemipenes was performed introducing into the cloacae 0.1-0.5 ml positive iodinated non ionic contrast medium.

RESULTS

the radiographic appearance of the hemipenis filled by positive contrast medium appeared as funnel shaped sometimes curved opaque shadow pointing caudally just caudal to the cloaca. in some cases where probably the hemipenis was filled by seminal fluid and cellular debris (seminal plugs), the contrast medium just delineate its shadow along its wall. the inner profile of the hemipenes was variable possibly related to the species. Sonographically, hemipenes appeared funnel shaped with an echogenic thin wall and ipo- to anechoic contents. Radiographic examination in three cases did not manage to outline the hemipenes.

DISCUSSION/CONCLUSION

Ultrasonography and radiology represent two good methods for the identification of hemipenes in snake sex determination. Radiology may determine false negative results due to poor distribution of contrast medium within the hemipenes.

REFERENCES

Boyd JS, Paterson MP, Dickie A: Ultrasound studies of reproductive events in some reptilia. Vet Rad & Ultr, 37, 6, 487, 1996.