

Estimation of the preantral follicles ovarian population in six-banded armadillos (*Euphractus sexcinctus*) infected or not by the *Mycobacterium leprae*

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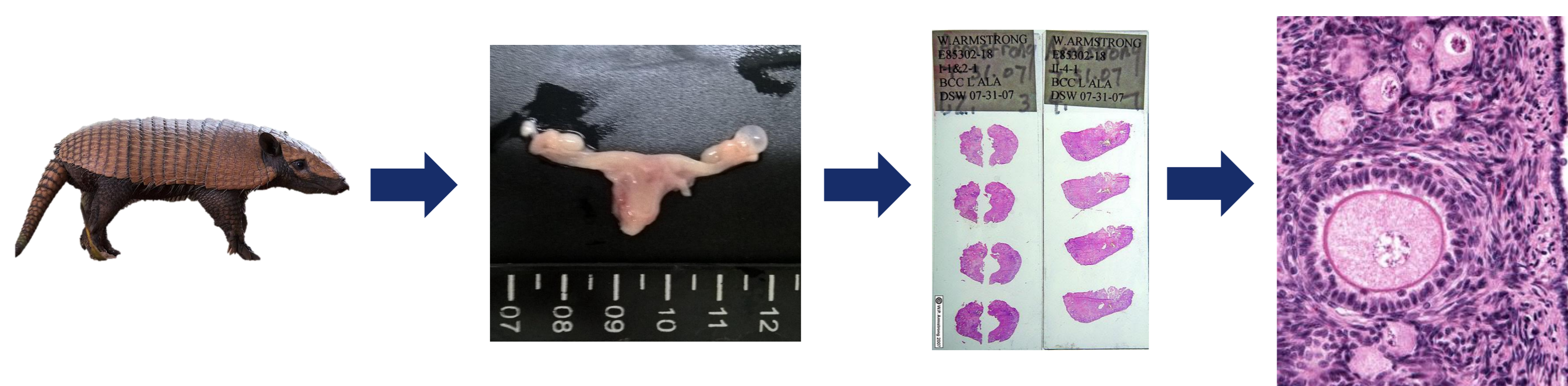


1. INTRODUCTION

The six-banded armadillo (Linnaeus, 1758) is a wild mammal of significant environmental and cultural importance in northeastern Brazil. However, they are natural reservoir hosts for the Hansen's bacillus that causes leprosy (*Mycobacterium leprae*), whose effects on reproduction are unknown. We aimed to estimate the population of preantral ovarian follicles (PAFs) in six-banded armadillos, which were carrying or not the *M. leprae*.

2. MATERIAL AND METHODS

Five sexually mature adult female six-banded armadillos were captured. The ovaries from all the individuals were collected and washed to remove dirt and contaminants. The gonads were histologically processed to make histological slides, which were stained with hematoxylin-eosin.



Samples were evaluated under light microscopy for the PAFs identification, measuring and counting, according to morphological category (primordial, primary, and secondary). The values obtained were given to the formula for estimating the follicular population: PAF population = [(number of follicles x number of sections x slice thickness) / (number of observed sections x mean diameter of the oocyte nucleus)].

3. RESULTS AND DISCUSSION

Data were expressed as means and SEM, and the statistical data were performed using the ANOVA test followed by Fisher's least significance test. The estimated population means are shown in table 1.

Table 1. Estimation of the ovarian follicular population in healthy and contaminated armadillos (*Euphractus sexcinctus*) (mean \pm SEM)

	Healthy animals	Infected animals
Primordial	3668 \pm 1067.8	2.040,6 \pm 542,5
Primary	2860.6 \pm 910	2.024,8 \pm 112,6
Secondary	147.2 \pm 41.2	46,7 \pm 21,6
Total	6175.8 \pm 1923.5	3112,1 \pm 615,1

Despite infected individuals presented proximately the half of the total PAFs population in comparison to healthy animals, no significant differences were evidenced ($P > 0.05$). We emphasize, however, that the infectious agent presents the capability of acting infiltratively in tissues and organs, and lepromatous infiltrate has already been found in the ovaries of another armadillo species, the *Dasypus novemcinctus*. Possibly, the low number of individuals could have interfered on the results. We verified that the majority of PAFs found were classified as primordial follicles, which are known for forming the reservoir pool in the ovary, similar as described for other mammals.

4. CONCLUSION

We provide new data related to the reproductive morphology and physiology of the six-banded armadillo, demonstrating, for the first time, the estimation for its PAFs population in individuals infected or not with *M. leprae*. This knowledge is of fundamental importance for the effective reproductive management of the species.

Acknowledgements:

