

INTRODUCTION

The castration of male pigs is mandatory in animals intended for meat consumption. Of the pig castration methods, the most used is surgical, where an incision of about 2 cm is made in each testicle for exteriorization. During the healing process, the surgical incision is in direct and constant exposure to environmental microorganisms, which makes it susceptible to secondary infections due to contamination by bacteria. Considering the high likelihood of post-surgical complications, rapid and effective management is extremely necessary for the healing of this type of wound.

The objective of this study was to evaluate the clinical evolution of the healing process of castration surgical injury in piglets treated with Photodynamic Therapy (PDT).

MATERIALS AND METHODS

The research project that gave rise to this study was approved by the Ethics Committee for the Use of Animals – CEUA/Universidade Brasil, under protocol nº 1900043.

10 piglets that underwent castration surgery were selected. They were divided into 2 treatment groups: Conventional treatment; PDT with Methylene Blue (MB) + conventional treatment. The lesions were photographed daily and the photos were analyzed with the aid of Image J software. The obtained data were evaluated by analysis of variance and Student-Newman-Keuls average test.

RESULTS E CONCLUSION

From day 4th, there was a difference in healing, especially the treatment with PDT (Fig. 1 and Fig. 2). In addition, it was evident in day 10 that the use of PDT accelerated the healing process. It can be concluded that PDT-treated surgical wounds presented better evolution of the healing process, therefore it is suggested to use PDT as alternative method to aid the acceleration of wound healing, as they showed positive traits in this process in surgical castration injury of piglets.



Fig. 1: Group Conventional treatment, monitoring of healing on days 2,4,6,8 and 10 after the surgical procedure.

Source: Own Author

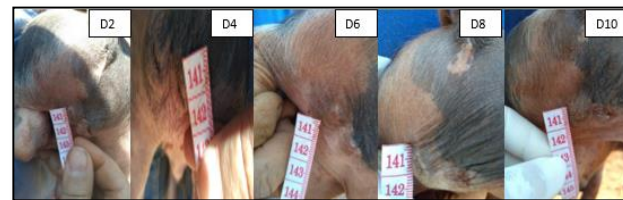


Fig. 2: Group Treatment with Photodynamic Therapy, monitoring of healing on days 2,4,6,8 and 10 after surgical procedure.

Source: Own Author