

Conference presentation

## Testicle histomorphometry in senescence/senility under use of homeopathy

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### Abstract

Aging is an extremely complex and multifactorial process. Over time, the elderly begin exhibiting signs of function reduction. The aim of the present study was to assess the effects of homeopathic medicines on testicle histomorphometry in senescence/senility. The study was approved by the animal experimentation ethics committee of Santo Amaro University (07/2015). The rats (Wistar, all male, with 22-23 months of age were used) were caged with access to food and water *ad libitum* and 12-hour light cycle (7:00 am to 7:00 pm). The homeopathic medicines were prepared following the Brazilian Homeopathic Pharmacopoeia. The animals were randomly distributed in 4 groups (n= 6): control; hydroalcoholic solution; *Calcarea carbonica* 30cH (*Calc*) and *Baryta muriatica* 30cH (*Bar-m*). 5 globules of the medicines were added to each water dispenser; the containers were changed twice per week along 40 days. All investigators were blinded to the allocation groups. After 40 days all the animals were euthanized and the testicles collected. Based on their width and length, the testicles' volume was calculated by means of the ellipsoid formula. Slides were prepared and stained with PAS. Photographs were taken of the slides with 40x magnification under microscope; software Image J was used to measure the diameter of 50 seminiferous tubules per slide (animal), diameter of the parenchyma and lumen of each tubule. Statistical analysis was performed by means of ANOVA followed by Tukey's test; the significance level was set to  $p \leq 0.05$ . Increase of the testicles' volume, increased parenchymal diameter and decrease of the tubular lumen was found in groups *Calc* and *Bar-m* compared to controls and the group treated with hydroalcoholic solution ( $p \leq 0.05$ ). We conclude that the tested homeopathic medicines changed the testicle histomorphometry of animals in senescence/senility.

**Keywords:** Testicular histomorphometry, homeopathy, *Calcarea carbonica*, *Baryta muriatica*, Senescence/Senility

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