

Cancer Diagnostics Conference & Expo

June 13-15, 2016 Rome, Italy

Mast cells inhibition as therapeutic approach on mammary cancer

Ana I Faustino-Rocha, Adelina Gama, Paula A Oliveira, Rita Ferreira and Mario Ginja
University of Trás-os-Montes and Alto Douro, Portugal

Breast cancer remains an important cause of death among women worldwide. Tumor microenvironment is composed by several cells such as inflammatory cells. Mast cells have been associated with increased vascularization and poor prognosis of women and female dogs' mammary tumors. This work intended to assess the role of mast cells on mammary cancer progression and vascularization. Procedures were approved by Portuguese (no.008961) and University (CE_12-2013) Ethics Committees. Female Sprague-Dawley rats were divided into five groups. Mammary tumors were induced in animals from groups I, II and III (n=10+10+10) by the intraperitoneal administration of N-methyl-N-nitrosourea (MNU) at 7 weeks of age. Groups II and IV (n=2) were treated with ketotifen (1mg/kg, drinking water) immediately after the MNU administration for 18 weeks; group III received the ketotifen after the development of the first mammary tumor. Groups I and V (n=2) received only water. Mammary tumors' proliferation (Ki-67, caspase-3 and -9) and vascularization (vascular endothelial growth factor (VEGF)-A) were evaluated by immunohistochemistry. One animal from group II died unexpectedly, the group was reduce to nine animals. Six animals from group I (60%), eight animals from group II (89%) and seven animals from group III (70%) developed a total of 58 mammary tumors (n=21+19+18). The majority of mammary tumors were classified as papillary non-invasive carcinomas. Mammary tumors from group II exhibited the lowest proliferation and apoptotic indexes. The tumors' vascularization was similar among groups (p>0.05). The reduction of mammary tumors' proliferation seems to be the mainly positive effect of the inhibition of mast cells' degranulation.

Biography

Ana I Faustino-Rocha has completed Master in Veterinary Medicine and is currently a PhD student in Veterinary Medicine at the University of Trás-os-Montes and Alto Douro. She has an experience in teaching. Her main areas of interest are oncology, angiogenesis and imaging. She is author/co-author of 22 papers in ISI reputed journals, 28 abstracts in ISI journals, 6 papers in international journals with referee, 56 publications in proceeding books of international and national conferences, 17 oral communications and 50 posters in national and international meetings. She is also a Member of Editorial Board of 3 scientific journals and collaborated as Reviewer of 38 papers from different journals.

anafaustino.faustino@sapo.pt

Notes: