Effects of Benzo[a]pyrene and Vibrio alginolyticus on the Tissue Structure of Immune Organs in Epinephelus coioides

Norouzi, Nagmeh¹; Salamat, Negin²*; Eskandari, Gholam Reza³; Mousavi, Mohammad⁴

¹- MSc Student, Department of Marine Biology, School of Marine Science, Khorramshahr University of Marine Science and Technology, Khorramshahr, Iran. Email: norozi.najmeh@yahoo.com
²- Assistant of Professor, Department of Marine Biology, School of Marine Science, Khorramshahr University of Marine Science and Technology, Khorramshahr, Iran. Email: salamatnegin@yahoo.com
³- Assistant Professor, Iranian Fisheries Research Organization, South Iran Aquaculture Fisheries Research Center, Ahwaz, Iran. Email: skandari.gh@yahoo.com
⁴- Associate Professor, Department of Fisheries, Faculty of Marine Natural Resources, Khorramshahr University of Marine Science and Technology, Khorramshahr, Iran. Email: mousavimohammad@gmail.com

Received Date: November 6, 2013 *Corresponding Author Accepted Date: April 27, 2014

© 2014 Oceanography. All rights reserved.

Abstract

In the present study, 140 Epinephlus coioides have been divided in to 7 groups including: 1. Control, 2. Group injected with coconut oil, 3. Group treated with V. alginolyticus, 4. and 5. Fish injected firstly with 20 and 200 mg/kg Benzo[a]pyrene (BaP) and bacteria after 48h, 6. and 7. Fish treated with 20 and 200 mg/kg BaP. Samples were taken from spleen and head kidney in day 1,2,4,7 and 14 of experiment and fixed in formalin buffer solution. 5 micrometer sections were prepared from tissues and were stained by hematoxylin and eosin. The tissue alterations including increase in melanomacrophage centers, bleeding, immune cell density, increase of broken RBC and bacterial colonies were observed in the spleen and head kidney of all treatments especially in days 4 and 7.

Keywords: Benzo[a]pyrene, Vibrio alginolyticus, Spleen, Head kidney, Epinephelus coioides.