Abstract

A mortality episode (>90%) of triploid and diploid oyster *Crassostrea gigas* cultured in Baja California Sur, occurred during the summer of 2012 coinciding with a thermal anomaly, an algae bloom, and low oxygen values. Histological analyses and molecular tests for specific pathogens [*Ostreid herpesvirus 1* (OsHV-1) and *Perkinsus marinus*] of surviving oysters at the end of the episode were performed to help explain the cause of the mortalities. Triploid oysters showed a high percentage of males (43%) and hermaphrodites (30%), 93% of these oysters were in the gonadic reabsorption stage; in some cases, hemocytes completely filled the lumen of the gonadic follicles. Oysters presented large areas with severe hemocyte infiltration that extended toward the digestive gland. Diploid oysters showed similar gonad alterations. None of samples showed histological or molecular evidence of OsHV-1 or *P. marinus*. Histological alterations can be related to physiological disorders attributable to summer mortality. This is the first case history of a summer mortality episode of oyster in Mexico.

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