

Viral encephalopathy and retinopathy is endemic in wild groupers (genus *Epinephelus* spp.) of the Algerian coast

Rachid Boukedjouta^{1,2} | Tobia Pretto³ | Miriam Abbadi³ | Lorena Biasini³ |
Anna Toffan³  | Karim Mezali¹ 

¹Department of Marine Science and Aquaculture, Faculty of Natural Sciences and Life, Protection, Valorization of Coastal Marine Resources and Molecular Systematics Laboratory, Université Abdelhamid Ibn Badis - Mostaganem, Mostaganem, Algeria

²National Centre for Research and Development of Fisheries and Aquaculture (NCRDFA), Bou-Ismaïl, Algeria

³Istituto Zooprofilattico Sperimentale delle Venezie (IZSVe), OIE Reference Laboratory for Viral Encephalopathy and Retinopathy, Legnaro (Padova), Italy

Abstract

This work describes betanodavirus infection in two species of groupers (family Serranidae) from the Algerian coast: the dusky grouper *Epinephelus marginatus* and the golden grouper *Epinephelus costae*. At necropsy, characteristic clinical signs, external injuries, clouded eyes and brain congestion, generally associated with viral encephalopathy and retinopathy (VER) infection were observed. The partial sequences of RNA1 and RNA2 from two viral strains were obtained, and the phylogenetic analysis revealed the presence of the red-spotted grouper nervous necrosis virus (RGNNV) genotype closely related to strains previously detected in groupers in the same geographic area. Results obtained in this study support the hypothesis that VER disease is endemic in the Algerian grouper population.

KEYWORDS

Algeria, betanodavirus, *Epinephelus costae*, *Epinephelus marginatus*, groupers, viral encephalo-retinopathy