

The distribution of *Vibrio cholerae* from the surface waters of Golestan province

Halako A (MSc)
Department of Biology
Islamic Azad University, Izeh Branch

Amir-Mozaffari N (PhD)
Department of Microbiology
Iran University of Medical Sciences

Foroohesh-Tehrani H (MSc)
Department of Microbiology
Iran University of Medical Sciences

Khormali M (BSc)
Faculty of Veterinary Science
Tehran University

Corresponding Author:
Halako A (MSc)

E-mail:
ahmadhalako@yahoo.com

Abstract

Background&Objective: *Vibrio* species are oxidase positive, gram negative bacilli that predominantly reside in surface waters such as lakes , rivers. They cause predominantly intestinal diseases as well as a few extra-intestinal complications. *Vibrio*-related diseases often rise during natural disasters such as floods. *Vibrio cholerae* cause cholera in humans. In this study, the occurrence of *Vibrio cholerae* in the surface waters of Golestan province, was investigated.

Materials&Methods: The APW and TCBS agar culture media were used for primary isolation of *Vibrio cholerae* and the exact species identification were done by performing the following tests; oxidase reaction, growth in 0% , 1% , 3% , 6% salt solution, lysine and ornithine decarboxylase, Arginine dehydrolase, ONPG and VP test, simmon citrate, bile esculin, indole, CAMP reaction, string test and specific antisera to *V.cholerae* 01. to confirm the findings, the special antiserum Ogawa and Inaba, were used.

Results: We were able to isolate 42 *Vibrio* spp. from a total of 54 water samples collected. The species included 35 non-01 *V.cholerae* (84.2%), 2 *V.mimicus* (2.63%) and 5 *V.cholerae* 01 (13.1%) isolat.

Conclusion: This study confirmed the existence of *Vibrio cholerae* 01 in 9% of samples from surface waters of Golestan province.

Key Words: *Vibrio cholerae*- Surface waters- Biotype- Serotype