



ISOLATION OF NON-O1 NON-139 VIBRIO STRAIN FROM IMMUNOCOMPROMISED PEDIATRIC PATIENT

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INTRODUCTION:

Vibrio cholerae is a species of bacteria. Some strain of Vibrio cholerae cause Cholera, a severe diarrhoeal illness. Vibrio cholera has many different types or serogroups. The current serotyping scheme of V. cholerae include 206 serogroups[2,3], only two of which can cause epidemic cholera. These two serogroups are called serogroup O1 & serogroup O139(O139 is found only in Asia) & can cause epidemic cholera, it also produce the cholera toxin[1]. The serogroups are known collectively as Non-O1 Non-O139 Vibrio cholerae[1,2]. These serogroups can cause a diarrhoeal disease which is less severe than cholera & doesnot have epidemic potential[1]. The Non-O1 Non-O139does not produce cholera toxin. The potential virulence factors of Non-O1 Non-O139 V.cholerae strain include Hemolysin, Repeat Toxin(RTX), Heat stable Entero Toxin & Shiga Like toxin[2].

CASE HISTORY:

A 5 year old immunocompromised male patient admitted in Govt. Medical College Hospital inpaediatric ward , with a H/o Loose motion & vomiting since 5 days. Patient having sudden onset of Loosemotions 5-6 episodes per day, stool was watery in nature, non foul smelling, non bloody, associated with history of non projectile vomiting, 2-3 times a per

day, vomitus is non biliary contains gastric content & food particles. Complaint not associated with H/o Fever, abdominal pain. Patient was on Anti Retroviral Therapy, taking Proton pump inhibitor medicines.

CASE EXAMINATIONS:

GENERAL CONDITION: Moderate

AFEBRILE.

SIGNS OF DEHYDRATION: Present(moderate).

PULSE: 97/min.

B.P.: 100/66 mm of Hg.

LABORATORY EXAMINATION:

SAMPLE: STOOL

GROSS EXAMINATION:Stool is watery in nature(Rice water appearance), No mucus flakes, No visible Blood, No visible parasites, No visible Pus, Non Smelling.

HANGING DROP PREPARATION: Darting type motile bacilli seen. No ova or cyst seen.

BLOOD AGAR: Large, Convex, Mucoid, Circular, Greyish colony, zone of Hemodigestion seen.

Mc-CONKEY AGAR: Late Lactose Fermenting colonies seen.

TCBS AGAR: Large, Convex, Mucoid, Yellowish colonies.

BIO-CHEMICAL TESTS:

OXIDASE TEST: Positive.

INDOLE TEST: Positive.

UREASE TEST: Positive.

CATALASE TEST: Positive.

TSI: A/A without gas.

CITRATE, V-P TEST: Negative.

IDENTIFICATION: *Vibrio cholerae*. Identification done as per standard test (5)

Further confirmation was done at National Institute of Cholera & Enteric Diseases, Kolkata.

RESULT OF NICED: Non-O1 Non-O139 *Vibrio*.

DISCUSSION:

Similar isolate has also been reported from different part of World like Latin America, Some part of Africa[1]. In India similar isolate is reported from Kolkata, Chennai[2]. Non-O1 Non-O139 commonly manifest in immunocompromised patient [4]. Infections are seasonal with a peak in the Late summer & early Rainfall coinciding the warmest water temperature[2]. Patient with this infection present mild to severe watery diarrhea, fever & bloody diarrhea are not associated with this isolate (All these findings correlate our finding). Immunocompromised patient can also develop sepsis which is associated with Fever, Chills & Shock[1] which has not observed in our study.

Non-O1 Non139 habitat in marine & coastal environment & generally transmitted

sea food or by direct contact with contaminated water but same isolate observed in Marathwada region of Maharashtra which is not a coastal region, & best of our knowledge this is the first case reported from Marathwada region of Maharashtra.

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