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SCIENTIFIC LETTER

Antibiotic Susceptibility and Molecular Characterization of *Campylobacter jejuni* Strain Isolated from a Guillain Barré Syndrome Child

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To the Editor : *Campylobacter jejuni* is among the leading etiological agents associated with bacterial diarrhea worldwide. In rare occasions, *Campylobacter jejuni* infection may trigger the human immune system to attack self-gangliosides resulting in Guillain-Barré syndrome [1]. We here, present case of a 7-y-old girl suffering from acute flaccid paralysis of lower limbs after an episode of bloody diarrhea. The child was wheel chair bounded but did not have any difficulty in breathing or swallowing and did not receive any antibiotic treatment. The patient showed elevated levels of cerebrospinal fluid (CSF) (261 csf mg/dl). She was treated with – 5d course of intravenous immunoglobulin (IVIG) at standard dose of 0.4 g/kg/d. No ventilation support was needed. On day 25th, she walked – 5 m distance with aid. *C. jejuni* was isolated from the patient's stool sample and identification was confirmed by using species specific (hipO) PCR [2]. The strain was found to be resistant to three antibiotics *i.e*., erythromycin, sulfamethoxazole + trimethoporim, cephalothin. PCR analysis for the detection of genes (*sul*1, *sul*2 and *sul*3) showed that the isolate was positive for all the three resistivity genes [3, 4]. Virulence genes *i.e.*, *cad*F (fibronectin binding protein) and *wla*N (putative beta-1,3-galactosyl transferase) were present whereas *Neu*AB (sialic acid biosynthesis gene) was absent [2]. The *wla*N gene in *C. jejuni* is proposed to encode an enzyme β-1,3-galactosyl transferase that converts GM2-like LOS structure to a GM1-like structure. These GM1-like structures trigger the human host to produce the anti-GM1 antibodies which binds to GM1 expressed on the motor nerves of the limbs, resulting in Guillain–Barré syndrome [5]. The presence of *wla*N gene in the present isolate further confirms the role of the gene in triggering AMAN, a variant of GBS. To our knowledge this is the first case of GBS following infection with *C. jejuni*, reported from Pakistan. Further investigations on prevalence and molecular characterization of *C. jejuni* associated GBS may contribute to a better understanding of the disease.

Conflict of Interest None.

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