

**TITLE:** *Arcobacter butzleri*: ANOTHER NEGLECTED ENTEROPATHOGEN?

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**ABSTRACT:**

The genus *Arcobacter* spp., belonging to the family *Campylobacteraceae*, is a Gram negative bacteria considered an emergent enteropathogen. This genus has diversity of habitats and hosts, and potential for zoonotic infections. *A. butzleri* was the fourth most common *Campylobacter*-like organism recovered from stools of patients with diarrhea in Europe.. The incidence of *Arcobacter* species is probably underestimated, due mainly to limitations in current detection and identification methods. In this case report, a case of bacteremia due to *A. butzleri* in an immunocompromised host is described. The blood culture was process in BD BACTEC (Becton Dickson®) and positives bottles were subculture to blood agar and chocolate agar, which were incubation at 35°C with 5% of CO<sub>2</sub>. The Gram stain of the positive bottles revealed curved Gram-negative rods. The growth in both medium was poor and observed after 2 days of incubation. The isolate was identified by matrix-assisted laser-detected ionization-time of flight mass spectrometry (MALDI- TOF MS) (Vitek MS, v 3.0 Knowledge base; BioMerieux®, Durham, NC). A 51-years-old man, presented at the Emergency Unit of HUCFF-UFRJ with watery and persistent diarrhea for the last month. He also complained of rectal pain and hematochezia. The patient was under investigation of an autoimmune disease with skin presentation, and was taking prednisone in high doses. Antimicrobial agent was empirically prescribed (ciprofloxacin and metronidazole). Investigation during hospitalization found a rectal adenocarcinoma with pulmonary and hepatic metastasis with dermatopolymyositis as paraneoplastic syndrome. The patient had multiples episodes of enterorrhagia. On 30<sup>th</sup> day of hospitalization, patient had hypotension, multiple organ failures. Blood cultures were collected and piperacillin-tazobactam was promptly begun, but the patient died. *A. butzleri* was the only bacteria isolated; this supports the assumption that it was the etiological agent of the previous persistent diarrhea. This case illustrates the unique challenge involved in diagnosing infections caused by emerging gastrointestinal pathogens. To the best of our knowledge, this is the first report of a human infection in Brazil.

**Keywords:** emergent pathogen, MALDI TOF MS, persistent diarrhea, *Arcobacter*