

Post-traumatic chronic bone and joint infection caused by *Butyricimonas* spp, and treated with high doses of ertapenem administered subcutaneously in a 30-year-old obese man

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DESCRIPTION

An obese but otherwise healthy 30-year-old man presented with septic pseudarthrosis following a post-traumatic open radial fracture. Three months earlier, the patient had been involved in a truck accident and suffered a distal open radial fracture associated with compartment syndrome (figure 1A). Primary management consisted of wound debridement, fasciotomy, stabilisation with external fixation and antibiotic prophylaxis with amoxicillin-clavulanate. The wound healed after 1 month (figure 1B). Due to pseudarthrosis (figure 1C, D), the patient returned to the operating room for internal fixation. He did not have fever, and there was no local sign of inflammation and no fistula; C reactive protein was <5 mg/L. Internal fixation was not performed, as a bone abscess in

the fracture site was discovered. Surgical samples revealed *Bacteroides vulgatus*, *Clostridium tertium* and *Butyricimonas* spp in cultures. MRI revealed several abscesses in the radius (figure 1E). As the patient refused central vascular access, he received prolonged high doses of ertapenem subcutaneously (1 g two times a day) for 3 months, with metronidazole during the first month, followed by clindamycin. The ertapenem (diluted in 50 cc of physiological serum) was infused subcutaneously by butterfly disposable needle in the lower quadrants of the abdomen and alternately on the anterior side of a thigh (figure 1F, G) during a 30–60 min gravity infusion. Arthrodesis was then performed and the outcome was favourable (figure 1H).

Butyricimonas spp are normal inhabitants of the intestine in humans and animals.¹ Bone and joint

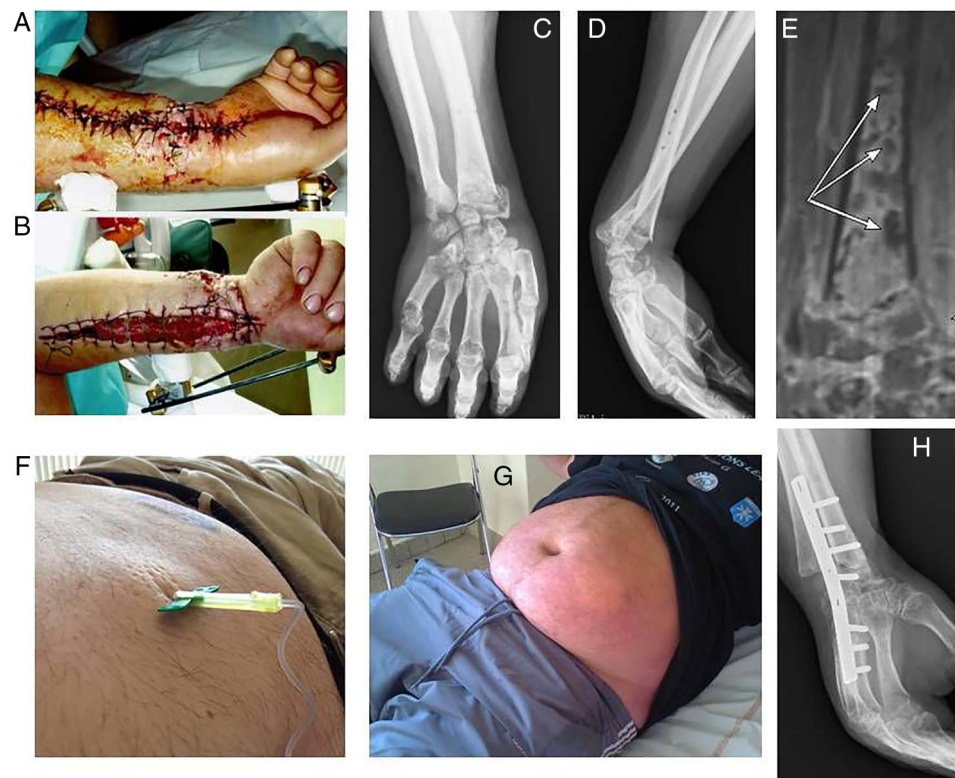


Figure 1 The patient with compartment syndrome following open radial fracture stabilised with external fixation (A). Favourable clinical aspect 1 month after fasciotomy (B). Radial pseudarthrosis (C) with subluxation (D). MRI revealing multiple intramedullary abscesses of the radius (E). Subcutaneous infusion of ertapenem using butterfly disposable needle (F) with tumefaction immediately following the injection in the lower left abdominal quadrant (G). Arthrodesis and favourable outcome (H) after 3 months of antimicrobial therapy.



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infection (BJI) caused by *Butyricimonas* has never been described. Prolonged ertapenem therapy administered subcutaneously could be useful for the treatment of anaerobic BJIs.²

Learning points

- ▶ *Butyricimonas* spp, a commensal anaerobe of the digestive tract, could be responsible for port-traumatic bone and joint infection.
- ▶ High doses of ertapenem administered subcutaneously are useful for the treatment of bone and joint infection due to anaerobic bacteria in patients refusing vascular access.

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