is critical. If clinicians suspect coccidioidomycosis, laboratory personnel should be alerted in order to reduce the risk of accidental exposure, since cultures of *Coccidioides immitis* must be handled with appropriate containment.

With the increasing number of Europeans traveling to endemic areas, it is important for clinicians to consider coccidioidomycosis, particularly in HIV-infected patients with a CD4+ lymphocyte count below 250/mm³.

### References


**Enterococcus cecorum**

**Septicemia in a Malnourished Adult Patient**

G. Greub¹, L.A. Devriese², B. Pot³, J. Dominguez⁴, J. Bille¹*

*Enterococcus cecorum*, a species typically isolated from chicken, pigs, calves, horses, ducks, cats, dogs, and canaries, was isolated from the blood of a patient with severe septicemia. The isolate was identified by conventional biochemical tests. Identity as *Enterococcus cecorum* was confirmed by SDS-PAGE analysis of whole cell protein. This is the first report of the isolation of *Enterococcus cecorum* in a clinical setting.

*Enterococcus cecorum* was first isolated from chicken intestines and described as *Streptococcus cecorum* in 1983 (1). It was reclassified as *Enterococcus cecorum* (2) based on the results of reverse transcriptase sequencing of its 16S ribosomal RNA. The species was further isolated from the intestines of pigs, calves, horses, ducks, cats, and dogs and from the crop of canaries (3–7). To our knowledge, *Enterococcus cecorum* has never been described in a clinical setting. Recently, this bacterium was isolated from two sets of blood cultures obtained from a 44-year-old woman who presented with symptoms and signs of septic shock.

**Case Report.** A 44-year-old woman was admitted to our hospital on 4 August 1995 for treatment of dehydration. At presentation she also had mucositis, cheilitis, glossitis, alopecia, diarrhea, and osteoporosis secondary to vitamin deficiency. In the past the patient had undergone numerous surgi-

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Figure 1: SDS-PAGE profiles of whole-cell extracts of different enterococci, including isolate 7504 (LMG 17333). Far left section: The mean correlation coefficient, expressed as a percentage ($r \times 100$) and represented as a dendrogram, calculated by the unweighted average pair grouping method for a number of *Enterococcus* spp. Points 20 to 325 of the 400-point traces, indicated by a gray bar on the molecular weight axis, were used for the calculation of similarities between the individual pairs of traces. The middle part of the figure represents a computer-processed printout of positions 0 (top of the gel, left-hand side of the pattern) to 360 (bottom of the gel, right-hand side of the pattern) of the digitised and normalised protein patterns of all strains compared. Right section: LMG numbers (Culture Collection of the Laboratory of Microbiology Gent, University of Gent, Gent, Belgium) and cluster delineation per species. $T$ indicates type strain; $t1$ & $t2$, two different colony types.

Clinical procedures for morbid obesity (digestive bypass, gastroplasty, surgical treatment of complications of previous operations). During the summer of 1995, she spent most of her time in the company of her three cats and one dog. Three weeks before admission, she presented with a worsening of her general status and multiple skin lesions located predominantly on her hands, feet, and sacrum, assumed to be due to malnutrition secondary to intestinal malabsorption and a loss of appetite.

Seven days after admission, the patient developed tachypnea (25/min), tachycardia (120/min), hypotension (blood pressure 85/55 mmHg), and mild fever (37.4°C). Severe sepsis with hypotension was suspected and subsequently confirmed by paraclinical parameters: lactic acidosis (lactate 2.7 mmol/l), hypotension with normal central venous pressure (8 mmHg), low systemic resistance (583 dyn /sec $\times$ cm$^{-5}$), and high cardiac output (8.09 l/min). Intravenous norepinephrine (4–8 $\mu$g/min) was begun in order to stabilize the systemic arterial pressure.

Two blood cultures were taken on day 7 after admission through a central jugular i.v. line in place for less than 2 h. A gram-positive coccus grew after two days of incubation in four biphasic blood culture bottles (Septi-Check; Becton-Dickinson, USA). The organism was susceptible to ampicillin, ciprofloxacin, imipenem, and vancomycin, as determined by the Kirby-Bauer disk diffusion method.

Imipenem was administered intravenously for nine days, followed by ciprofloxacin for five more days. The patient’s fever decreased, and thereafter, the hemodynamic variables improved rapidly. Blood cultures taken on day 9 after admission from three different intravascular catheters (arterial, side-arm, and Swan-Ganz) remained sterile. The catheters were not cultured when removed. The septicemia was not explained by any other infectious or noninfectious origin.

The turbidity of all four blood culture broths was increased, and small bacterial colonies were seen on the chocolate agar side of the Septi-Check slide. Microscopic examination of gram-stained blood culture smears revealed short chains composed of about four gram-positive cocci. Catalase, pyrrolidonyl peptidase, and group D antigen reactions, performed on the slide’s colonies, were all negative. Different solid agar media were inoculated. Growth of small colonies was obtained from all four bottles on chocolate agar, Columbia blood agar, and sheep blood agar after one day of incubation in a CO$_2$ atmosphere and on supplemented blood agar under anaerobic conditions. The isolate, assigned number 7504, formed small, smooth, regular, gray, and bulgy colonies (1–2 mm in diameter) that were slightly alpha-hemolytic on sheep blood agar. No growth was obtained after overnight incubation in bile-esculin medium and in 6.5% NaCl broth. Catalase, pyrrolidonyl peptidase, and group D antigen reactions were still

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**Table 1:** Characteristics differentiating isolate 7504 from main groups of enterococci (adapted from Reference 9).

<table>
<thead>
<tr>
<th>Reaction (% positive)</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Isolate 7504</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mannitol</td>
<td>+ (100)</td>
<td>+ (99)</td>
<td>- (7)</td>
<td>+</td>
</tr>
<tr>
<td>Sorbitol</td>
<td>+ (67)</td>
<td>- (0)</td>
<td>- (0)</td>
<td>-</td>
</tr>
<tr>
<td>Sorbose</td>
<td>+ (67)</td>
<td>- (0)</td>
<td>+ (94)</td>
<td>+ (100)</td>
</tr>
<tr>
<td>Arginine</td>
<td>+ (0)</td>
<td>+ (94)</td>
<td>+ (100)</td>
<td>-</td>
</tr>
</tbody>
</table>

+, positive reaction; -, negative reaction; v, variable.