Postoperative Mediastinitis Due to *Finegoldia magna* with Negative Blood Cultures

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We report a case of *Finegoldia magna* (formerly known as *Peptostreptococcus magnus*) mediastinitis following coronary artery bypass in a 50-year-old patient. Even if staphylococci remain the main causative organism of postoperative mediastinitis, the responsibility of anaerobic bacteria must be considered in cases of fever and sternal drainage with negative blood cultures.

**CASE REPORT**

A 50-year-old man was admitted to the cardiothoracic surgery department to undergo coronary bypass surgery. His medical history was notable for high blood pressure, dyslipidemia, and myocardial infarction 2 years earlier, treated by percutaneous angioplasty of the right coronary artery. He also had undergone two surgical interventions on both maxillary sinuses in the past 20 years for recurrent sinusitis. Because of persisting chest pain episodes 1 year after the myocardial infarction, a cardiac catheterization was performed, which disclosed double-vessel coronary atherosclerosis. The patient underwent a double internal mammary-coronary artery bypass on 15 October 2008. The prophylactic antibiotic therapy protocol included intranasal application of mupirocin before and 4 days after the intervention and intravenous cefamandole during surgery. Neither intraoperative nor immediate postoperative complications were noted. Three days after surgery, the patient was febrile at 38.9°C, in association with dehiscence and instability of the sternum, and underwent extensive sternal and mediastinal debridement with placement of eight mediastinal drainage tubes on the same day. Blood cultures, all performed before administration of antibiotics, remained negative. However, all intraoperative cultures of mediastinal material grew within 48 h, and *Peptostreptococcus* sp. 16S RNA gene amplification and sequencing were carried out as described previously (11), leading to the identification of *Finegoldia magna* (formerly *Peptostreptococcus magnus*). The strain was susceptible to metronidazole and amoxicillin and resistant to clindamycin and erythromycin. Vancomycin and gentamicin were discontinued, and metronidazole was added to the amoxicillin. Apyrexia was obtained 2 days after surgery, and the patient completed a 6-week course of amoxicillin and metronidazole. On the last visit, 90 days after the first surgery, the patient was afebrile with satisfactory sternotomy closure.

*Finegoldia magna* is a gram-positive anaerobic coccus, part of the normal flora of the human mucocutaneous surfaces. It is frequently isolated in infections of soft tissues and the peritoneal cavity, and a few cases of endocarditis and pericarditis have also been reported (2, 9, 12, 17). Poststernotomy mediastinitis due to *F. magna* is far more uncommon. To our knowledge, only five cases formally due to *F. magna* have been reported to date (Table 1) (4–8, 15).

As shown in the table, anaerobic mediastinitis following cardiothoracic surgery is often polymicrobial (Table). However, in our case the association with *Streptococcus oralis* was not considered significant, since the *S. oralis* strain had been cultured in only one specimen in enriched medium and was not recovered in intraoperative cultures. Since anaerobes are often isolated in deep wound infections, it is surprising that anaerobic mediastinitis has been reported infrequently. Considering the increased isolation of anaerobic bacteria observed discussed elsewhere (10), one can hypothesize that this is due to...
Only local debridement was performed in this patient. Peptostreptococcus magnus, no. of cases reported.

Finegoldia magnac species, great vessel cured Ticarcillin-clavulanate, amoxicillin-

Prevotella melaninogenica Peptostreptococcus, Prevotella melaninogenica Penicillin 2/Male Transposition of the dcephalosporin Clindamycin, vancomycin Cured Clostridium perfringens Escherichia coli 5/Female Fallot's tetralogy 1st-generation cephalosporin Clindamycin, vancomycin Cured Bacteroides thetaiotaomicron, Staphylococcus aureus 29/Male Cardiac assist device Unknown Finegoldia magnac Staphylococcus aureus, Staphylococcus aureus 1996 (2) 43/Female Coronary bypass Unknown Vancomycin, gentamicin Cured 6 isolates (including 4 Peptostreptococcus) Various Various Various 10

Bacteroides oralis, Bacteroides brevis

TABLE 1. Reported cases of anaerobic poststernotomy wound infection

Amoxicillin-clavulanate, ampicillin-sulbactam

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Appropriate sampling and culturing can probably lead to increased isolation of anaerobic pathogens in this postoperative complication. No funding was obtained for this study.

In conclusion, anaerobic agents can be responsible for postoperative blood cultures in patients with fever and sternal pain. As illustrated in our case, a diagnosis of bacterial mediastinitis is highly plausible for a patient with fever and mediastinal air. Computed tomography is also classically not associated with positive blood cultures among patients with Staphylococci aureus infection (10). The source of infection in our patient could not be established but he had undergone two previous surgical procedures on his sinus several years before with no recent recurrence. He had undergone a history of medical procedures and enhanced the usefulness of mediastinal puncture in cardiac surgery centers and technical difficulties, highlighting the need for routine use of anaerobic culture media for all microbiological samples.
REFERENCES