

Risk factors identified for pneumonia after heart surgery

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Ventilator-associated pneumonia (VAP) is the main cause of nosocomial infection in patients undergoing major heart surgery. An international study of 25 hospitals from 8 European countries, published in BioMed Central's open access journal *Critical Care*, has confirmed the degree of danger posed by VAP and identified the main risk factors.

Javier Hortal, from the Hospital General Universitario Gregorio Marañón, worked with the European Study Group on Nosocomial Infections (ESGNI) and the European Workgroup of Cardiothoracic Intensivists (EWCI) to carry out a prospective study of 971 patients undergoing major [heart surgery](#). They found that 4.4% acquired some form of nosocomial infection and VAP accounted for almost half of these (2.1%). According to Hortal, "The crude mortality rate of patients with VAP in our study was found to be 35%, this is significantly more than the mortality rate of 2.3% seen in patients who avoided VAP. The overall mortality rate for VAP in patients undergoing MHS may be as high as 16-57%, but many critically ill patients with VAP die because of their underlying disease rather than of [pneumonia](#), which makes analysis difficult."

The authors found that, apart from the amount of time spent on mechanical ventilation, other risk factors for the development of VAP included transfusion requirements, type of surgery and the need for re-intervention for haemorrhage or cardiac tamponade in the immediate postoperative period. Hortal said, "Most unfortunately, the majority of the variables that significantly predict VAP are not amenable to

intervention."

The authors recommend that anticipative or pre-emptive antimicrobial therapy should be explored as one of the few potential interventions to avoid VAP in patients remaining under mechanical ventilation for more than 48 hours.

Source: BioMed Central ([news](#) : [web](#))

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