

# IS FOREIGN MATERIAL EXTRACTION MANDATORY EVEN IN CLINICALLY UNREMARKABLE PATIENTS WITH CHRONIC THROMBOEMBOLIC PULMONARY HYPERTENSION?

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**OBJECTIVE:** Patients with ventriculo-atrial (VA) shunts or pacemakers and history of shunt/lead infection are at increased risk for chronic thromboembolic pulmonary hypertension (CTEPH) and frequently show unfavorable outcome. Most of these infections are associated with staphylococci, which enhance fibrotic vascular remodeling after thrombosis.

**METHODS:** Between January 1997 and December 2013 224 patients (in New York Heart Association class III or IV) underwent pulmonary endarterectomy (PEA) for CTEPH at the Hannover Medical School. Eight patients had a concomitant VA-shunt (n=2), pacemaker (n=5) or an infected vena cava filter (n=1). In these patients PEA was performed with subsequent foreign material removal. In case of a VA-shunt it was converted to a ventriculo-peritoneal shunt. All pacemakers were substituted by epicardial leads with subsequent aggregate implantation.

**RESULTS:** There was no 30 days mortality in these patients. Only in one pacemaker patient with recurrent fever we preoperatively confirmed a positive blood culture for staphylococcus epidermidis. In 2 infection-free patients we detected staphylococcus epidermidis in the postoperative analysis of removed leads. In the other two pacemaker patients and in both VA-Shunt patients despite of negative microbiological tests, we intraoperatively documented plenty of vegetations on the leads/shunts' surface. In the patient with vena cava filter we removed massive thrombotic vegetations from the right atrium and inferior vena cava, which were positive for lactobacillus ramosus in the postoperative analysis.

**CONCLUSIONS:** In our series we documented a favorable outcome and no increase of operative risk in patients undergoing PEA and foreign material removal. Simultaneous removal of foreign material should be carried out even in asymptomatic CTEPH patients, where no infection can be confirmed preoperatively, because a possible subclinical infection cannot be ruled out and its impact on CTEPH recurrence remains unclear.