Objective: Some patients with pervenous pacemaker need to remove whole pacing system via median sternotomy by using cardio-pulmonary bypass (CPB) because of infection or system failure. We examined the procedural risk and long term outcome of removal of pacing system by using CPB. Methods: From August 1998 to April 2011, the removal of leads was performed in 8 patients (mean age 59 years, including 7 male and 1 female) via median sternotomy by using CPB under general anesthesia. The original diseases were 4 A-V block, 2 SSS, 1 AF and 1 Brugada syndrome. The reason for removal were eradicating infection in 6 cases and allergy in 1 case, lead functional failure in 1 case. Positive culture results were observed in 5 cases of 6 infectious cases, including 2 MSSA, 1 MRSA, 1 CNS, and 1 MRSE. Results: The Mode of concomitant operation includes 2 mitral valvuloplasty, 1 CABG, and 2 tricuspid annulo-plasty and 7 putting of myocardial pacing lead. For the long term follow up, one case of infection recurrence was observed, then received exchanging of the infected system. We identified all of the 7 cases that were followed up are alive. Conclusions: Complete removals of pacing system by using CPB were safe and have been successful with favorable long term results. Keywords: pacemaker removal, cardio-pulmonary bypass, median sternotomy