Aim: The device leads perforating the myocardium are contraindicated for percutaneous lead extraction (LE). The purpose of this study is to investigate the usefulness of multidetector computed tomography (MDCT) or angiography to identify the perforating lead before LE. Methods: Among consecutive 44 patients underwent LE, we performed MDCT in 30 patients and angiography of RA, RV in 31 patients. The images were investigated to assess the possibility of lead perforation. Results: In 9 patients, the tip of the leads seemed protruding from the myocardium (RV apex n=7, RA appendage n=2). LE was performed under the thoracotomy in 6 patients with possible perforation, considering for the risk of cardiac tamponade. In 6 patients (67%) with possible perforation, the percutaneous LE was succeeded without any complications. In 3 patients (33%), the leads were surgically extracted. In cases with thoracotomy, surgical observation revealed that 2 RA and 1 RV leads were sticking out of the myocardium, but covered with pericardium and fat pad (pseudo-perforation). Two RA leads underwent surgical removal, but the RV lead was safely extracted by percutaneous technique. Conclusion: Though the percutaneous LE was safely performed even in most patients with the findings of pseudo-perforation, we have to pay attention not to make the complications in these patients. Keywords: lead extraction, pseudo-perforation, pacing lead