Microdislodgement of right ventricular passive fixation lead for complete atrioventricular block after the repair of ventricular septal perforation

Shin Kashimura
Shuhei Yamashita
Keisuke Suzurikawa
Koutarou Uchida
Ryouta Kitaajima
Shunsuke Katakowa
Daishuke Shinmura
Koutarou Fukumoto
Takahirou Koura
Kouji Negishi
Shun Shibuya
Keiichiro Kasama
Yasuko Uranaka

Introduction: Complete atrioventricular block (CAVB) is a severe complication of ventricular septal perforation due to myocardial infarction. The report of the instability of endocardial ventricular passive fixation lead onto damaged myocardium is rare.

Methods: N/A

Result: 76 year-old man was admitted for ST-elevated myocardial infarction due to proximal left anterior descending artery occlusion complicated with ventricular septal perforation. After the percutaneous catheter intervention, the urgent operation was performed. Ruptured ventricular septum which size was 15mm was repaired using polyethylene and bovine periocardial patch. 4 days after the operation, CAVB was developed and passive fixation lead was placed at the base of right ventricle (RV). Using active fixation lead and placing the ventricular lead to RV septum was avoided due to damaged and repaired myocardium. The lead could not be delivered to the RV apex because the patch was arched out into RV. The next day, the pacing threshold was 0.5V/0.4msec. 9 days later, CAVB recurred and the pacing threshold increased to 4.5V/0.4msec without clear evidence of the dislocation of the lead by chest X-ray. Emergent resetting of the ventricular lead to more caudal direction was performed.

Conclusion: Placing the passive fixation lead onto damaged and repaired myocardium required attention. Microdislodgement could occur even 1 week after the operation.