A case of heart failure exacerbated after Leadless pacemaker implantation.

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**Introduction**: Case: 89 years old, male. He had been in our hospital with atrial flutter since May 2008. In October 2017, he was admitted for surgery for rectal cancer recurrence. Because he was in advanced atrioventricular block, he inserted a temporary pacemaker and performed surgery. We also considered the implantation of permanent pacemaker, but since there were no symptoms and the remaining life was around 6 months, we decided not to implant. However, since heart failure signs were observed in February 2018, a leadless pacemaker was implanted. Although heart failure was improved after implantation, heart failure signs were observed again two months after implantation. He was admitted to the hospital in June 2018 due to exacerbation of heart failure.

**Methods**: We observed dyssynchrony exacerbation and LVEF decline that may be due to right ventricular pacing. Therefore, we changed the setting of leadless pacemaker to VVI back up rate 50bpm.

**Result**: Echocardiography was performed 3 hours after the setting change. Dyssynchrony had disappeared. At the time of discharge, the EF improved from 35% to 40%, and after one month it was further improved to 48%.

**Conclusion**: We reported that it was rare in cases of dyssynchrony exacerbation and LVEF decline with right ventricular pacing in a leadless pacemaker.