**Introduction**: Atrial standstill is a rare case but can lead to a serious condition such as tromboembolic event.

**Methods**: A 66 year-old female patient referred to our hospital with confusion, dizziness and motoric aphasia for almost 3 weeks. She was diagnosed as an ischemic stroke and hospitalized in other hospital. She had diabetic and history of percutaneous coronary intervention (PCI) in 2017 and 2019. Her electrocardiographic showed junctional rhythm 41 beats per minute with occasional premature ventricular complexes. Echocardiography revealed no atrial contraction, normal left ventricular function, trivial aortic, tricuspid regurgitation and no thrombus seen. Non-contrast CT Brain showed a large cerebral infarction with transformation of hemorrhagic on the left frontoparietal lobe. Permanent pacemaker implantation was performed and showed no electrical activity in all area of the right atrium. The patient then successfully implanted a single chamber ventricle permanent pacemaker. One month later she came in outpatient clinic with a good improvement.

**Result**: Atrial standstill is a rare, progressive disease that can potentially lead to a lethal tromboembolic event. Early awareness of this condition can provide good outcome.

**Conclusion**: Atrial standstill is a rare, progressive disease that can potentially lead to a lethal tromboembolic event. Early awareness of this condition can provide good outcome.