RHYTHM PUZZLE - QUESTION

An irregular atrial tachycardia

What is the underlying mechanism?

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Published online: 27 October 2017 © The Author(s) 2017. This article is an open access publication.

A 66-year-old male patient with a history of rheumatoid arthritis, coronary artery disease, hypothyroidism, end-stage renal disease and receiving haemodialysis presented to the emergency department with palpitations. His medication was acetylsalicylic acid, pantoprazole, levothyroxine, and paracetamol and ibuprofen as needed. Laboratory test results showed a mild anaemia and serum potassium levels within the upper limit of normal. A 12-lead electrocardiogram was recorded (Fig. 1). The electrocardiogram shows narrow QRS complexes (0.08 sec) with a QS morphology in leads V1 through V4 consistent with an old antero-septal wall myocardial infarction. The rhythm is irregular at an average rate of 79 beats per minute with groups of beatings separated by pauses. However, the underlying rhythm is not a sinus rhythm.

Question

What is the mechanism?

Answer

You will find the answer elsewhere in this issue.

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Fig. 1 The irregular atrial tachycardia