Sinus Bradycardia - ECG

Sinus bradycardia is a relatively common finding. The ECG is quite normal (P waves are followed by QRS complexes and T waves), but heart rate is below 60 beats per minute. In common speed of the paper, this means that the distance of 2 neighbor QRS complexes is greater than five large squares.

Note: The pulse rate per minute of an ECG can be estimated by dividing the number 300 by the number of large squares between two QRS complexes.

The distance between two QRS complexes is almost equal to 7 large squares. 300 divided by 7 is 45, heart rate is therefore 45 beats per minute. There is no other clear pathology and the rhythm is sinus, so it is probably a simple sinus bradycardia.

Conclusion: Sinus bradycardia does not always have a clinical significance. On the contrary, it is an absolute normal finding in healthy athletes. Deeper and symptomatic sinus bradycardia may be related to some medication (especially beta-blockers, digoxin and some calcium channel blockers). In addition, sinus bradycardia may be present in some other diseases such as sick sinus syndrome (SSS). When the bradycardia is symptomatic and when withdrawal of any present bradycardia-related drugs is not efficient, the permanent cardiostimulation may be the only option.