

Similar heart rates between atrial fibrillation and sinus rhythm in asymptomatic populations justify large scale screening to improve the detection of atrial fibrillation.

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**Purpose:** Atrial fibrillation (AF) is known to be asymptomatic in up to 1/3 of patients. Early detection is however useful to prevent thrombo-embolic event. Since 2010, large awareness and screening campaigns are organized annually on a national level. Clinical characteristics of AF diagnosed during screening in this asymptomatic population are however not known.

**Methods:** Voluntary screening was performed using the Omron® Heart Scan. At the moment of screening, subjects were asked to complete a simple questionnaire to assess their clinical characteristics. In 2012, 21.586 asymptomatic subjects were screened in 89 hospitals. A total of 17.563 questionnaires was collected from subjects older than 40 years and analyzed using a SPSS program.

**Results:** At the time of screening, 17.329 subjects were in sinus rhythm (SR) at Heart Scan (group 1), and 234 were in AF (group 2), giving a prevalence of AF of 1.35%. AF was further confirmed by a 12 lead ECG performed immediately after the screening in 56 subjects (group 3). Mean heart rate at the time of screening in group 1, 2 and 3 was  $80 \pm 14$ ,  $86 \pm 20$ , and  $92 \pm 23$  bpm. Mean age was  $61 \pm 11$ ,  $70 \pm 10$ , and  $69 \pm 11$  years. CHA<sub>2</sub>DS<sub>2</sub>VASc score was  $1.6 \pm 1.2$ ,  $2.5 \pm 1.5$ , and  $2.5 \pm 1.5$  respectively. **Conclusions:** A large overlap of heart rates between subjects in AF or in SR was observed in this asymptomatic population. A heart rate < 110 bpm was noted in the majority of subjects in AF, which might explain the asymptomatic nature of AF in this population. These findings highlight the necessity of screening for asymptomatic AF in patients at risk for thrombo-embolic events.

