

Telemedicine for Diagnosing and Managing Paroxysmal Atrial Fibrillation in Outpatients. The Phone, not the Pill, in the Pocket

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BACKGROUND

Individuals who experience paroxysmal atrial fibrillation (PAF) are at risk of several serious sequelae, including stroke. PAF episodes usually occur in the out-of-hospital setting, and patients seek emergency services for differential diagnosis and treatment.

METHODS

The medical records of all subscribers with one or more episodes of recurrent PAF and managed by the call center between 2/2002-8/2009 were retrieved. Treatment protocol consisted of initial electrocardiographic (ECG) confirmation of PAF and repeat ECGs within 24 hours. Management was exclusively by telephonically transmitted recommendations (Group A) or also included intervention by the attending physician of a 'SHL'-Telemedicine mobile intensive care unit (Group B).

RESULTS

A total of 649 cardiac patients (1886 PAF episodes) were enrolled. The leading complaint was palpitation (57%). The 576 Group A patients had 1667 objectively documented PAF episodes, of which 1326 (79.5%) were converted into sinus rhythm by following telephonically delivered instructions. Their mean heart rate decreased from 85±15 to 66±10 beats per minute (bpm) (P<0.001). Heart rate remained unchanged (86±15 bpm) for those who remained in PAF. The 160 Group B patients (218 PAF episodes) had a conversion rate of 70% (153/218). The heart rate in converted cases decreased from 92±24 bpm to 68±21 bpm compared to a decrease from 90± 21 bpm to 87±21 bpm for those whose arrhythmia persisted (P<0.001).

CONCLUSIONS

Telemedicine for rapid out-of-hospital diagnosis and provision of objective documentation and instructions for appropriate management of PAF is feasible and could avoid potential PAF-associated complications and unnecessary emergency room visits and hospitalizations.