Dear Editor,

Mobile phones have made our daily communication convenient; however, the potential electromagnetic interference (EMI) effects on medical devices have been noticed.\textsuperscript{1-3} Some type of restriction of mobile phone use in hospitals were recommended, with use greater than 1 meter from equipment and restrictions in clinical areas being the most common.\textsuperscript{4} Here we reported a case of heart-unrelated illness whose electrocardiogram (ECG) could easily be misinterpreted if there is no awareness about the interference from mobile phone.

A 54-year-old gentleman visited our Emergency Department for progressive abdominal fullness. His vital signs were within normal limits on arrival. Physical examination was unremarkable apart from a tympanic abdomen with decreased bowel sound. His past medical history was non-contributory. Abdominal roentgenography showed distended intestine with air-fluid level. Laboratory results were all within normal limits. Surface 12-lead ECG was performed before his admission for his age and cigarette smoking. Fluttering waves with cycle of about 0.14 second (corresponding to atrial rate 430 cycles/min) and ventricular rate of 92 beats/min were revealed, especially in lead II, III, aVF, V1-V3 (Figure 1A). Because of this unpredicted ECG finding from his physical examination, repeated ECG was undertaken with similar result. After finding and turning off his mobile phone (GSM phone; 1,800 MHz) in stand-by mode located in his trouser pocket, the fluttering wave disappeared and sinus rhythm could be identified (Figure 1B).

It is not news that mobile phones can interfere with medical devices. Although there are requirements about not using mobile phones in hospitals, violations are common, even by medical personnel. A false positive arrhythmia on ECG may be interpreted in this case if the physician was not alert about the discrepancy between

\begin{figure}
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\caption{ECG findings before and after turning off the mobile phone.}
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his ECG and physical. More aggressive implement of mobile phone restriction in clinical areas should be executed or a new generation of mobile phone without EMI could be developed and marketed.

REFERENCES


Figure 1. Surface Electrocardiogram of this Patient. A: The mobile phone was stand-by; B: The mobile phone was turned off.