Statement for the Optimal Use of Home Electrocardiograph 2007

Committee for the evaluation and optimal use of home electrocardiograph, Japanese Society of Electrocardiology

Committee Members:
Takao Katoh (chairman), Teruhisa Tanabe (vice-chairman), Takanori Ikeda, Masayuki Ishijima, Makoto Itoh, Shiro Iwanaga, Masashi Kasao, Yuji Kasamaki, Rinya Katoh, Hiroyuki Kamata, Yutaka Kubo, Kaoru Sugi, Bonpei Takase, Kaoru Tanno, Koichiro Yoshioka, Eiichi Watanabe, Masaaki Yashima (secretary)

Backgrounds and the Activities of the Committee

The small pocket electrocardiograph that is aimed to record paroxysms of arrhythmia and the anginal attack has come to be widely used in the clinical setting. This depends on recent advances of electronic technology that lead striking improvements of hardware and software of electrocardiograph.

The event recorders including pocket electrocardiograph has been widely applied to make up for 24-hour Holter monitoring. In addition, some event recorders with simple operation system and speedy analysis via telephone or internet have been used not only in the hospital but also in home medicine or telemedicine. Besides, its new application is expanding to fitness club for healthy people and company’s health check system for their employee under doctor’s guidance.

Several models named as the home electrocardiograph are already in the open market and an individual can purchase it freely as well as the home sphygmanomanometer which has come into wide use. It has the possibility to spread rapidly to the general family as well from now on.

This committee was founded in July 2006 as an ad hoc committee of the Japanese Society of Electrocardiology to discuss about the evaluation and optimal use of home electrocardiography in Japan.

After one-year discussion and the analysis of questionnaire among committee members we settled on the statement for the optimal use of home electrocardiograph and the following messages were announced officially at the 24th Annual Scientific Meeting of Japanese Society of Electrocardiology held in Nagoya, October 5, 2007.

Foreword

The various kinds of small pocket electrocardiographs has been developed and come into practical use these days. Many hospitals have carried on the examination for cardiac events using these electrocardiographs as well as 24-hour Holter monitoring. Some of these event recorders are now open to the market and for individual use as “the home electrocardiograph”, same as the home sphygmanomanometer has come into use.

For customers

It is supposed that customers of the home electrocardiograph could be a cardiac outpatient, or an individual who is highly motivated to maintain his or her health including early detection of cardiovascular diseases. These users should use the home electrocardiograph understanding that the device is not appropriate for diagnosing cardiovascular diseases but for referring some of its data at doctor’s consultation. In that sense, it is to be desired for individuals to purchase the home electrocardiograph recognizing that building a trustworthy relation with a responsible doctor or a hospital is an essential premise for effective use of the device.

For manufacturers and retailers

It is advisable that medical instrument companies should comply with the rules for medical instruments such as Drug Legislation, establish a responsible marketing system with moderate advertisements, and offer users full information, although the home electrocardiograph is on the market. Besides, the companies should pay well attention for the package design or the instruction for use, not to be confused
the home electrocardiograph with the small pocket electrocardiograph which is for clinical use and similar for appearance.

The present condition and problems of the home electrocardiograph

The records of the home electrocardiograph have some limits on its quality and quantity of information compared with standard 12-lead electrocardiogram since it is basically single lead. The records at paroxysms of cardiac events and repeated periodical records, however, contain important information especially for cardiovascular disease, and that has possibility to lead to early diagnosis and treatment. Furthermore, it is supposed that the home electrocardiograph could become effective for health management of individuals in the future.

On the other hand, electrocardiogram, unlike numerical data such as blood pressure, often requires high level of medical knowledge and diagnosis skill to be deciphered in its waveforms or rhythms. In the actual clinical settings, some self-recorded data of the home electrocardiograph is actively used, while others also disturb doctors’ duties at busy outpatient clinics.

Doctor’s discretion

The records of home electrocardiograph should be deciphered at doctor’s discretion under the rules of each hospital’s system in the case that the users request the doctor or the hospital to read them. Each hospital is expected to make an effort to arrange their clinical and decipherment systems that lead to early diagnosis and treatment by further sophisticated examinations such as 24-hour Holter monitoring or event-recorder. Moreover, asking cardiologists’ opinions is also desired if necessary, to keep the responsible doctors from being too much burdened with the decipherment of electrocardiogram.

Conclusion

The home electrocardiograph could be useful for patients with cardiovascular diseases as a tool to manage their health by themselves, and so as for healthy people, as a kind of instrument which offers health information. It is expected to be developed and improved much more in the future. It is important to build a good relation and cooperation between manufacturers, retailers, users, doctors and hospitals to make the optimal use of the home electrocardiograph feasible.

Additional opinion

Some committee members pointed out in the discussion that certain fees should be refunded by public insurance when the doctor treats the patient using the information of electrocardiogram which was recorded by the home electrocardiograph at home.