

Praxis Depeschen Award 2007

Praxis Depesche annually awards the **Praxis Depeschen Award** for pharmaceutical and medical products, therapy and diagnosis equipment.

For the very first time, in 2007 the expert committee of the award ceremony recommended a cordless ECG monitor:



The Experts

Dr. Susanne Schauer,
(Primary Care Physician,
Internist), Dr. Peter Wand
(Consulting Physician in
General Medicine),
Weender Landstr. 27,
37073 Göttingen.



**Dr. med.
Heinrich Holzgreve**,
Doctor, scientist and
university lecturer in Internal
Medicine. With clinical and
research interests in hyper-
tension, nephrology, cardio-
logy and clinical pharmaco-
logy. He has been working
at a cardiology practice in
Munich since 2001.



**Dr. med.
Jörg Michael Herrmann**,
Directing Physician and
Clinical Hypertension
Specialist (ESH). Clinic for
Rehabilitation Glotterbad,
Gehrenstr. 10,
79286 Glottertal.



Hans Spude,
Managing Director of GFI
Medical Informatics Society
and Publisher of Praxis
Depesche.

Factors that were considered decisive in choosing the hand-held ECG monitor were **the obvious security advances for patients-at-risk and diversified applicability in out-patient and home care.**

Cardiovascular disease is still the number 1 cause of death in Western industrialized nations. Due to the increase in living standards, the WHO also expects mortality rates for cardiovascular disease to significantly increase in the developing world.

**Award-winning 2007 OMRON
with the cordless ECG monitor.**

**OMRON
HCG-801-E
HeartScan**



**Decisive for the Omron
HCG-801-E HeartScan award**

The possibility of monitoring cardiovascular events through the very patients, who are at risk and through the out-patient doctor, is a substantial contribution to advances in medicine.

- Exact ECG-curves can also be recorded at home
- Immediate assessment on the display
- Easy handling also for patients
- High accuracy
- Universal applicability

The committee also evaluated OMRON's social competence and responsibility.

Praxis Depeschen Award 2007

The importance of ECG self-monitoring for the assessment of patients' cardiac state of health

Cardiovascular disease is still the number 1 cause of death in Western industrialized nations. Due to the increase in living standards, the WHO also expects a "tsunami wave" of cardiovascular morbidity and mortality in the developing world during the next 20 years, above all in Asia. Besides heart attacks and strokes, in the past years, cardiac arrhythmia has also come to the forefront in scientific research. Causes for this are the increase in coronary arteriosclerosis and cardiac stress due to diabetes mellitus, hypertension and ailments such as hyperlipidaemia as well as the increase in life expectancy.

Starting at age sixty, 20 to 30 per cent of patients already suffer from cardiac arrhythmia, which can increase the risk of cerebrovascular complications. This partly unplea-

sant, often dangerous and life-threatening cardiac arrhythmia must be diagnosed and treated as early as pos-

sible. The problem: at the beginning it only occurs from time to time (intermittently); thus, it is difficult to diagnose during a doctor's visit. In clinics and cardiology practices, there are comprehensive diagnostic possibilities available such as the 12-channel ECG, 24-hour ECG and the stress ECG. When cardiac arrhythmia only occurs intermittently, it can sometimes be recognized with an Event-Recorder. To do this, however, the Event-Recorder must be worn from 1 to 3 weeks and attached with electrodes to the chest. With the new ECG monitor (Omron HCG-801-E HeartScan), which can be carried in the patient's jacket or trouser pocket, discomforts such as palpitations, tachycardia, heart palpitations, cardiacgia can be recorded and saved at the touch of a button. With a simple USB card-reader, the examining doctor can view, print and evaluate the ECG curves on a PC (see fig. 1).

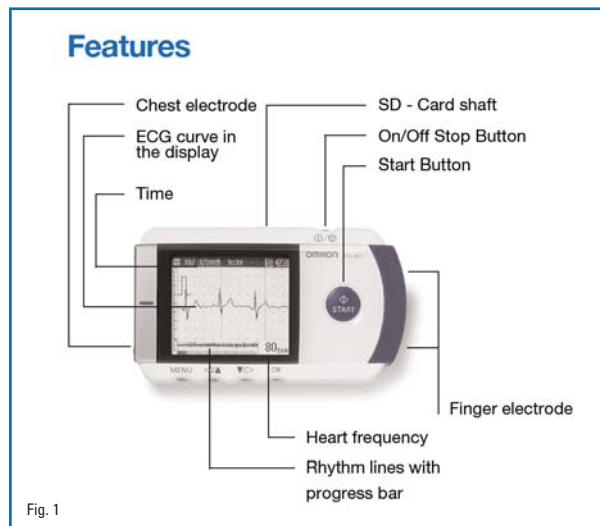


Fig. 1

The award-winning portable ECG-Monitor Omron HCG-801-E HeartScan

With the single channel ECG monitor, the exact ECG curves of patients with disorders caused by cardiovascular

conditions can be recorded. This ECG monitor provides support in the practice and at home, and aids in the medical attendance of outpatients in the clinic and during therapy supervision. HeartScan thus marks an innovative step forward towards prevention and early diagnosis of cardiovascular disease. With an SD card-reader, up to 300 ECGs in a pulse range of 2 to 200 beats (Range: 0.05 to 40 Hz) can be recorded. The supplied alkaline batteries enable approximately 400 measurements in total. The ECG monitor,

including the batteries, weighs only 130g. This light-weight feature allows easy monitoring in everyday situations (fig. 2). After the recorded ECG has been printed by the doctor, an exact diagnosis can be made. The corresponding therapy, which is usually prescribed by the doctor, who has loaned the monitoring device, can also be followed-up by any other doctor. Thus, any significant ECG changes can be easily documented and recognized with the HeartScan device (see fig. 3-7).

Conclusion

The assessments made by the doctor, which have either been recorded with a 12-channel ECG or with the Heart-



Fig. 2: Easy use of the HeartScan monitor

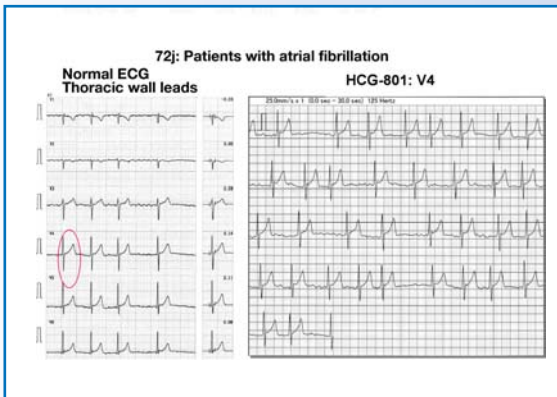


Fig. 3

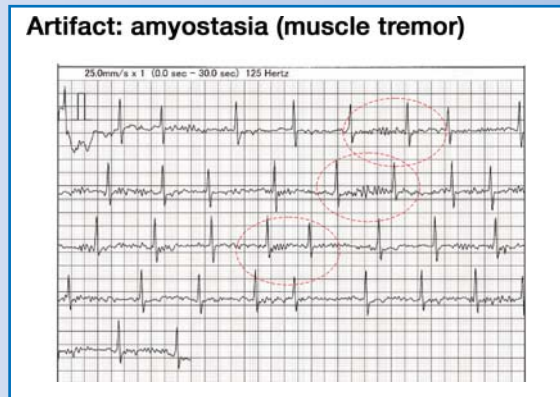


Fig. 4

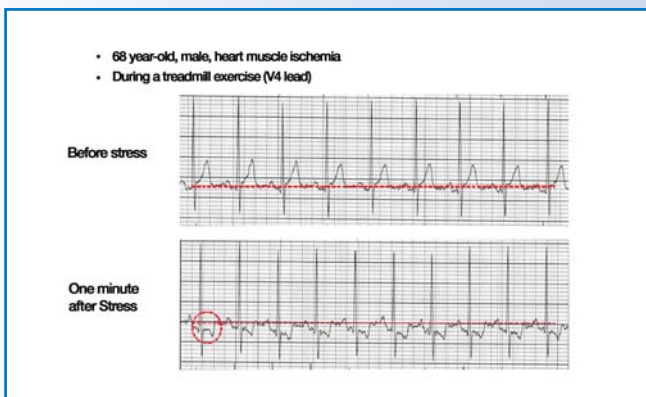


Fig. 5

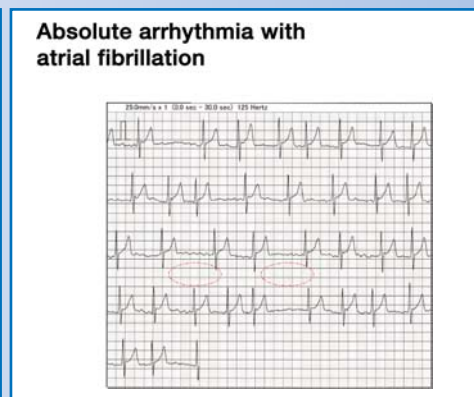


Fig. 6

Scan, show a high degree of correlation (Y. Ozawa et al.) (see fig. 8). The compared results of the 12-channel ECG and the HeartScan show that the HeartScan device can be safely used outside of the clinic and the practice by patients with cardiovascular disease. A wide range of important changes can thus be recorded and documented.

Benefits for the Patient

Responses to a questionnaire by Praxis Depesche show that 97% of doctors (n=1049 Doctors) believe that there is a great advantage to using HeartScan on patients with cardiac arrhythmias and 64% agree that patients with functional heart complaints, cardiac arrhythmias or coronary heart disease benefit. HeartScan is very user-friendly and can be used everywhere to record ECGs. In comparison to other ECG monitoring

systems, HeartScan can be placed on the chest as needed for a short period of time (30 seconds). Thus, the long-term attachment of electrodes to the chest - as in the 24-hour ECG or the 1-3 week Event Recorder - is no longer

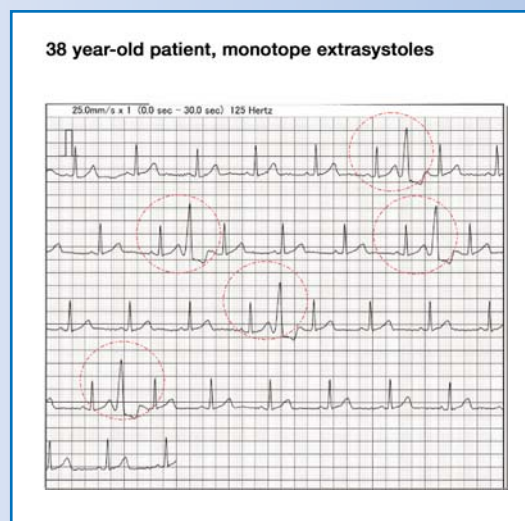


Fig. 7

necessary. Should a change occur in the ECG, the patient must see the doctor and discuss, for example, possible treatments, further documentation or additional diagnosis. In this way, it is possible to discover intermittent ECG changes and prevent life threatening events from occurring through adequate and timely treatment.

Applications

► In doctors office

With HeartScan, the primary care physician can make a quick diagnosis of patients suffering from cardiovascular-related conditions.

► Home care

The device is best suited for the doctor's pocket: the information displayed enables immediate assessment without having to print or download.

► Medical supervision of out-patients

For patients with occasional complaints such as allodymy, an irregular pulse, tachycardia, heart palpitations, or other cardiovascular complaints, which cannot be recorded with the

Praxis Depeschen Award 2007

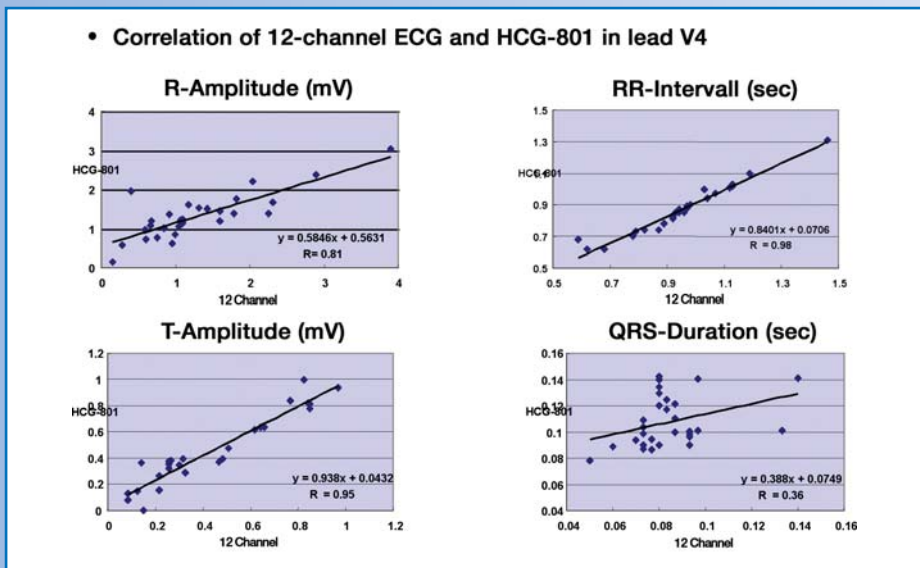


Fig. 8

conventional ECG in the practice, the device can be loaned out to the patient to enable monitoring outside of the practice. With this kind of monitoring, organic conditions causing cardiac arrhythmia can be differen-

tiated from functional somatic complaints.

► In the clinic

As in the practice, the HeartScan can compliment the 12-channel or 24-

hour ECG if the patient's intermittent cardiac complaints do not occur during the so-called diagnostic routine methods and, for this reason, cannot be documented. During in-patient treatment, not all patients can be monitored with a continuous ECG although this would be helpful. In the following situations, the HeartScan ECG Monitor enables quick controlling of the heart's function:

- Before and during dialysis
- Post-operatively
- In the attendance/intensive care unit
- After transferring from the intensive care unit to the general ward.

With its compact design, the device easily fits into a lab coat, so that the doctor can print the ECG and assess it at anytime during a patient's consultation or visit.

► Therapy Supervision

After heart rhythm disturbances have been diagnosed and the corresponding prescription of antiarrhythmics have been determined, HeartScan can be implemented. The patient can borrow the self-monitoring device to control the effectiveness of the treatment as well as document and adjust the prescribed dosages.

These examples show:

Based on its services and features, HeartScan is suitable for a wide variety of uses. The cordless feature and direct display panel enable a quick evaluation of the patient's cardiovascular condition.

Practice Report

Evaluation of Omron HeartScan HCG-801-E

Our company has tested the manufacturer's 1-channel ECG in our practice and we can say the following:

The device offers a quick and reliable way of diagnosing patients outside of the practice. Because of its size, it can be transported in a briefcase problem-free and is very easy to operate.

Areas of application were, above all, private patient house calls and nursing homes.

First and foremost, the purpose is to quickly detect acute myocardial ischaemia and to distinguish different heart rhythm disturbances. This helps to avoid time-consuming and costly transportation of patients to the practice.

This very sophisticated device can only be optimized through a 3-channel lead, which, however, because of its size, can hardly be realized. Apart from this, its fool-proof operation would then not be guaranteed.

Dr. Schauer

Imprint

Editor: ST Science Transmitter,
Paul-Wassermann-Str. 15, 81829 Munich
Person responsible under German
press law: J. Stojic
Design: vm-grafik, Munich
Printer: Vogel-Druck, HÖchberg