August 1969 Brief 69-10188

NASA TECH BRIEF

Direct Reading of Electrocardiograms and Respiration Rates

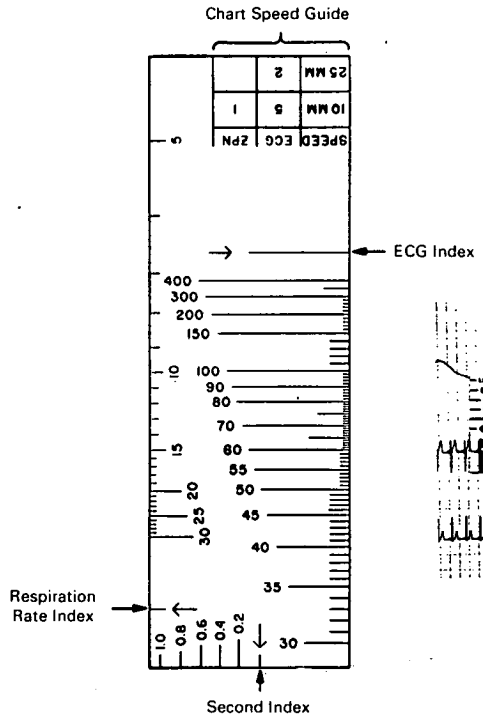

Fig. 1. Scaled card

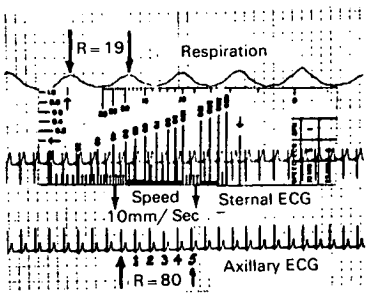

Fig. 2. Card indicating 19 respirations per minute

The problem:

To develop a fast, accurate method of reading heart and respiration rates. Formerly, the quick method of reading recorder traces of electrocardiograms and respiration rates consisted in analysis of a 10-second period and multiplication by six for a count; errors could result.

The solution:

A new technique enables quick direct reading of heart and respiration rates. The appropriate index of a calibrated card of transparent plastic, about 6 inches long (Fig. 1), is aligned with a repetitive point on the electrocardiogram or respiration complex. For recorder speeds of 10 and 25 mm/sec the number of complexes are counted as indicated on the card, and the heart or respiration rate is read directly from the appropriate scale (Fig. 2); for other recorder speeds, the number of complexes to be counted is determined by simple numerical conversion (speed 5 mm/sec = 10 ECG, 2 ZPN). The readings yielded are accurate as well as immediate; they save much time in data analysis.

(continued overleaf)

Also incorporated on the card is a second indicator for aiding measurement of time intervals on the electrocardiogram complex at 25 mm/sec. Doctors, hospitals, and health authorities may be interested.

Note:

No further documentation is available. Inquiries may be directed:

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Reference: B69-10188

Patent status:

Inquiries about rights for commercial use of this invention may be made to NASA, Code GP, Washington, D.C. 20546.

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