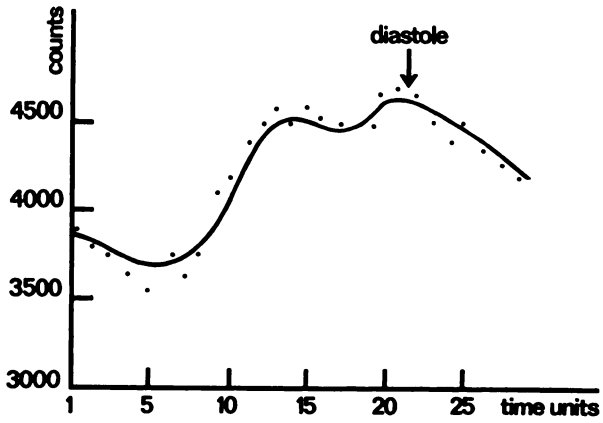

FIG. 1. The incorrectly gated left ventricular volume curve. Note that diastole (maximum) occurs near point 21 instead of point 1. By translating the maximum 7.5 time units to the right (200 msec), diastole may be placed at the correct position in time. One time unit is approximately 27 msec.

gram (Fig. 1). This curve exhibits a depressed initial value and would yield an incorrect (reduced) ejection fraction upon analysis. We interpreted such data in terms of a time delay between monitor output and R-wave gate. By translating the ventricular histogram so that its maximum occurred at the first cardiac interval point, we were able to determine a temporal delay of 200 ± 30 msec between diastole and our gating signal. Subsequent communication with the computer manufacturer revealed that the ECG monitor interface was actually sensitive to the negative-going phase of the monitor signal—i.e., was firing approximately 180 msec later than the R-wave. Since searching for maxima and minima of the left-ventricular volume curve is done entirely through the program, it was not possible to override the timing discrepancy with software.

Upon subsequent changing of the interface to trigger on a positive-going pulse, the analysis problem disappeared. It is apparent, however, that users of multiple-gated cardiac studies should be careful that the gating signal is of the appropriate polarity. If not, the length of the pulse may cause an equivalent delay in the synchronization between the ECG signal and the computer-generated left-ventricular curve.

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FOOTNOTES

* Medical Data System (MDS) SIMUL®
† MUGE®

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2. PITT B, STRAUSS HW: Evaluation of ventricular function by radioisotopic techniques. *N Engl J Med* 296: 1097-1099, 1977

Computer-Assisted Liver Mass Estimation from Gamma Camera Images

I note an important error in our paper "Computer-Assisted Liver Mass Estimation from Gamma Camera Images" (*1*). The correct equation for the liver-mass estimate derived from the computer-assisted right lateral area measurement is:

$$\text{Liver Mass (kg)} = 0.0107 \text{ Area (cm}^2\text{)} - 0.215.$$

This correction changes the scale of the abscissa of Fig. 1 in the paper by a factor of 0.34.

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REFERENCE

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I-125 Fibrinogen Test Complicated by Allergic Dermatitis Caused by Skin Marker

A 59-year-old man was injected with 100 μCi of I-125 labeled fibrinogen. For 72 hr radioactivity over the legs was counted at carefully measured and marked sites and compared to the precordium. Abnormal ratios consistent with active thrombophlebitis were recorded over the right leg. At 24 and 48 hr ratios became less abnormal but at 72 hr count ratios became higher and erratic.

Using a Rembrandt permanent No. 100 felt black pen, a circle had been drawn at each measurement site and over the precordium at the time of injection. About 24 hr later angry raised errythematous circles appeared at each point where ink had been applied. The skin was washed thoroughly with alcohol and treated with topical steroids. The lesions slowly subsided during the next week.

The patient had a history of allergy to sulfa.

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The Value of Radionuclide Angiography in the Evaluation of Suspected False Aneurysms

A partial laceration of an artery can result in the formation of a false aneurysm, which is an encapsulating hematoma communicating with the tear in the arterial wall. The mechanism is usually a penetrating injury such as orthopedic trauma (*1*, *2*), iatrogenic from surgical procedures, such as overdrilling or use of excessively long screws for plate fixation (*3*), or an infection, leading to a mycotic aneurysm (*4*). False aneurysms have been formed after arterial punctures for arteriography (*5*) or for laboratory blood samples, and after insertion of an indwelling arterial catheter for monitoring purposes.

Reported are two cases of false aneurysm demonstrated by radionuclide studies. The first patient developed the false aneurysm after repeated brachial-artery punctures to measure blood gases. In the second patient an excessively long screw fixing a side plate to the femur was responsible. In both cases the initial diagnosis was made with a radionuclide flow study (*4*, *6*), showing the value of radionuclide angiography as a noninvasive screening procedure.