

Debra Fulps
Medical Positioning, Inc.
1717 Washington
Kansas City, MO 64108

Dear Debra,

We have seen a definite improvement in the data derived and our lab's general experience by switching our exercise device from upright bicycle to supine bicycle with the Stress Echo™ Bed from Medical Positioning, Inc. Prior metabolic stress echocardiograms at our institution proved to be very difficult in many regards. Upright imaging was strenuous for the sonographers and subjected them to scanning postures that no doubt increased their risk for musculoskeletal injury. The previous tests yielded suboptimal 2D Echo images and Doppler signals during the mid and peak exercise levels due to the patient's upright posture while pedaling the bicycle. Acquisition of immediate post-exercise images was also limited by the amount of time it took to transfer the patient from the bicycle to the imaging bed. Handling of the metabolic and ECG testing apparatus, patient fatigue, along with the physical and sometimes mental limitations found in the patients we commonly study, made transfer to the imaging bed extremely difficult and cumbersome. By the time the patient was properly positioned for immediate post-exercise imaging, enough time would pass to allow intracardiac pressures to return close to baseline. This method also placed a great deal of physical and mental stress upon the patient.

Supine bicycle exercise provides greater comfort for both the patient and the sonographer. The echocardiographic windows are easily accessible and enhanced by the left lateral tilt function and imaging drop section on the Stress Echo™ Bed. The patient transfer from imaging bed to bicycle and back again is eliminated, so the patient's mental stress and perceived exertion is reduced. The sonographer is able to maintain a comfortable scanning position for the entire study.

Ventricular size, function and hemodynamics may be more closely and accurately followed throughout the entire procedure allowing for more complete assessment of the patient's functional status and response to stress. Capturing high quality images and Doppler signals during steady state exercise is no longer the challenge it was with upright exercise. Reliable and repeatable data can be documented with confidence and comparative ease by our staff.

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