

Dogs ease anxiety, improve health status of hospitalized heart failure patients

DALLAS, Nov. 15 – When it comes to health care, “going to the dogs” is a good thing, according to new research reported at the American Heart Association’s Scientific Sessions 2005.

Researchers discovered that a 12-minute visit with man’s best friend helped heart and lung function by lowering pressures, diminishing release of harmful hormones and decreasing anxiety among hospitalized heart failure patients. Benefits exceeded those that resulted from a visit with a human volunteer or from being left alone.

Animal-assisted therapy (AAT) has been shown to reduce blood pressure in healthy and hypertensive patients. It reduces anxiety in hospitalized patients, too.

Still, the therapeutic approach of using dogs to soothe people’s minds and improve health has been considered more a “nicety” than credible science, said Kathie M. Cole, R.N., M.N., C.C.R.N., lead author of the study and a clinical nurse III at the UCLA Medical Center in Los Angeles.

To determine the potential benefits of animal-assisted therapy on health, the researchers studied 76 hospitalized heart failure patients and their reactions to a visit from either a human volunteer and dog team, a human volunteer only or no visit (the at-rest group). Patients were randomly assigned to one of these three approaches.

“We looked at the dogs’ effects on variables that characterize heart failure, including changes in cardiac function, neuroendocrine (stress hormone) activation and psychological changes in mood,” Cole said.

The intervention lasted 12 minutes. In the volunteer-dog team group, specially trained dogs (of 12 different breeds) would lie on patients’ beds, so patients could touch them while interacting with the volunteer-dog team.

Researchers monitored patients’ hemodynamics — the collective system of measurement for blood volume, heart function and resistance of the blood vessels. They measured hemodynamic pressures just before the 12-minute intervention, eight minutes into the intervention and four minutes after the intervention. Investigators also measured epinephrine and norepinephrine levels at these three time points, and administered an anxiety test before and after the intervention.

Researchers found that anxiety scores dropped 24 percent for participants who received a visit from the volunteer-dog team. Scores for the volunteer-only group dropped 10 percent and the at-rest group’s score did not change. Researchers measured anxiety with the Spielberger’s self report state anxiety inventory.

Levels of the stress hormone epinephrine dropped an average 14.1 picograms/mL or 17 percent in the volunteer-dog team group; 2 percent in the volunteer-only group; and rose an average of 7 percent in the at-rest group.

Pulmonary capillary wedge, the measurement of left atrial pressure, dropped an average 2.1 mmHg, or 10 percent, at the end of the intervention for those receiving volunteer-dog team therapy. However, it increased 3 percent for the volunteer-only group and increased 5 percent for the at-rest group.

Systolic pulmonary artery pressure, a measure of pressure in the lungs, dropped in the volunteer-dog team group 5 percent during and 5 percent after therapy. It rose during and after therapy in the other two groups.

The volunteer-dog team group showed more improvement than the volunteer-only group in right atrial pressure, norepinephrine level and heart rate.

“This study demonstrates that even a short-term exposure to dogs has beneficial physiological and psychosocial effects on patients who want it,” Cole said. “This therapy warrants serious consideration as an adjunct to medical therapy in hospitalized heart failure patients. Dogs are a great comfort. They make people happier, calmer and feel more loved. That is huge when you are scared and not feeling well.”

Co-authors are Anna Gawlinski, R.N., D.N.Sc., and Neil Steers, Ph.D.

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Notes: This study is the first randomized Animal-assisted therapy trial to look at subjects with severe heart failure in the critical care setting. Norepinephrine and epinephrine catecholamines have not been looked at before in addition to the cardiopulmonary measurements utilizing a pulmonary artery catheter.

Twelve different breeds participated which helps to add external validity to that portion of the study. The breeds happened to include two golden retrievers, 1 Great Pyreneese, 1 Std poodle, 1 German shephard, 1 dachshund, 2 labrador retrievers, 1 irish setter, 1 Bernese Mountain dog, 1 border collie, 1 miniature schnauzer.

No incidents or negative encounters have occurred with the dogs certified in the People Animal Connection Program at UCLA Medical Center.