Letter by Schmitto et al Regarding Article
“Large Animal Models of Heart Failure: A Critical Link in the Translation of Basic Science to Clinical Practice”

To the Editor:

We read with great interest the review by Dixon and Spinale1 on “Large animal models of heart failure” and congratulate the authors on a well written and timely article. In addition to those cited in the article, there are several more heart failure animal models in other species that are worth mentioning, including those in calves, goats, or even baboons.2–4

“Coronary microembolizations” is a topic that deserves further elaboration. In addition to the description by Sabbah et al,5 the feasibility of performing repetitive coronary microembolizations in dogs, many groups have successfully used various approaches to microembolizations, but with different embolic materials. For example, Franciosa et al6 injected glass beads into the left circumflex coronary artery of dogs to produce chronic left ventricular-dysfunction. Weber et al7 slowly injected latex microspheres into the left main coronary artery in calves. Furthermore, Smiseth et al8 used a single intracoronary injection of microspheres in dogs to produce acute severe depression of left ventricular-function. With these studies, a single injection of microspheres was used. This produced left ventricular-dysfunction, but the mortality was high, however. To create a stable and reproducible animal of chronic heart failure, Schmitto et al9,10 were the first to describe a novel chronic heart failure model induced by multiple, repetitive, and sequential coronary microembolization in sheep.

We wholeheartedly agree with the authors that “undoubtedly, large animal models of heart failure will continue to play a crucial role . . . in the development and refinement of heart failure therapies.”

Disclosure

None.

References

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