Wish-Fulfillment as a Determinant in the Interpretation of Technology

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The year 1970 saw the introduction into clinical practice of the Swan-Ganz catheter. This was a derivative of a research tool that permitted the measurement of something that was believed to be involved in the control of fluid transportation across the pulmonary capillary walls. The justification for its use in clinical practice was that it could be used to explain and predict the occurrence of the clinical syndrome of pulmonary edema. This justification was put forward then, as it still is now, because it was based on Starling’s version of fluid transport across capillary walls. However, this was a figment for which there was then, as there is now, not an iota of support in observation. There is now, in addition, a growing awareness of the inadequacy of current descriptions of pulmonary microcirculation as observations increase. Despite this, articles still appear extolling the usual, as well as some untapped interpretations of the Swan-Ganz measurements and promises of some others, as yet unrevealed.

Today’s cardiovascular pathophysiology affords support for Francis Bacon’s dictum of almost 400 years ago, which commented on the mysterious viability of error. The situation, with respect to the widely used Swan-Ganz measurements in clinical practice, is actually one of those measurements, whose physiologic meaning is not established. It is being used to make clinical interpretations based on a conception of capillary function that is purely imaginary. What, then, has motivated the creation of this superstitious system? Questions of this sort cannot be answered definitively except perhaps by the creation of additional superstitions.

This replacement of observation in medicine by what seems to be sound logic is apparently a factor. This seems to be motivated by an emotional need for certainty where certainty is not possible. Leibnitz’s suggestion, made several centuries ago, that what seems correct must be correct, seems to make wish-fulfillment a proper guide to science.

REFERENCES


*Francis A. Countway Library of Medicine, Boston.
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