

## Page for the General Public

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(on behalf of the Editorial Office)

The following pages summarize and review this issue's articles for an audience without a background in medicine or research.

### Original Research Articles

*Louis H. Stein, et al.: "Too Cold to Clot? Does Intraoperative Hypothermia Contribute to Bleeding After Aortic Surgery?"*

For replacement of the aortic arch (the top of the aorta, which give off the branches to the head and arms), we often cool the patient to a low temperature (18° C or 64° F) and stop blood flow for an interval of 30 to 45 minutes. This is called Deep Hypothermic Circulatory Arrest (DHCA). This is a very valuable technique that makes possible aortic procedures that could not otherwise be performed.

Cardiac surgeons have always suspected that the process of cooling to low temperatures interferes with the ability of the blood to clot normally, which is required to prevent post-operative bleeding.

This paper shows that cooling did not have any serious deleterious effect on bleeding after cardiac surgery. This paper is supportive of the technique of DHCA.

*Christian Olsson, et al.: "Modifiable Risk Factors for Early Mortality in Low-Risk Penn Class Aa Acute Type A Aortic Dissection Patients – A Descriptive Study"*

Acute Type A dissection refers to a splitting apart of the layers of the aortic wall in the ascending aorta, the part that rises up from the heart toward the top of the chest. This is one of the most serious catastrophes that can befall the human body. Prevention of this event is the reason for what we call "prophylactic", or preemptive, surgery on the dilated ascending aorta.

This paper examines detailed operation-related factors seen in patients who did not survive surgery for this devastating event of ascending aortic dissection.

These detailed observations help surgeons to plan their strategy for managing the acutely (re-

cently) dissected ascending aorta.

### State-of-the-Art Review

*Vamshi Krishna Kotha, et al.: "Early Results of the PETTICOAT Technique for the Management of Acute Type A Aortic Dissection"*

As mentioned above, dissection refers to a splitting apart of the layers of the aorta. For the descending aorta, the part running down the back of the chest, we often deploy a stent graft to force the layers back together. The stent graft is comprised of a metal spring-like latticework, which is deployed and forces a cloth stent (tube) up against the layers, to push them together.

The cloth helps to seal the aorta, but it can also obliterate small branches of the aorta outside the stent. If these arteries supply the spinal cord, this can result in paralysis of the legs.

In a design called the "Petticoat" type of stent graft, the lower portion of the graft has a metal latticework, but no cloth, so it can push



the layers together without any cloth covering vital side branches.

This imaginative approach promises additional safety for patients, and it takes its name after an item of women's clothing.

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