



Letter to the Editor

Subclinical thrombus formation in bioprosthetic pulmonary valve conduits: Reply to Wei



Matthias Sigler*, Thomas Paul

Pediatric Cardiology and Intensive Care, University Medical Center Göttingen, Germany

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Dear Dr. Wei,

We really appreciate your Letter to the Editor related to our manuscript entitled "Subclinical thrombus formation in bioprosthetic pulmonary valved conduits".

In three homografts preserved at -70°C for one year you detected evidence of suspicious chronic inflammation with granulocyte infiltration at the cusp base as assessed by histology and immunohistochemistry.

To the best of our knowledge presence of granulocyte infiltration is a strong indicator for acute inflammation, usually directed against infective agents. We wonder whether microbiological testing was performed

since bacterial contamination of the homografts is the most probable cause for an acute inflammatory process in this setting prior to cryopreservation. In our own series, granulocytes were *only* found in explants from patients with endocarditis.

However, within your letter you raise an important issue. Immunological competence is a significant factor contributing to the inflammatory response against biological implants which may even result in increased thrombogenicity. In our series on 47 bioprosthetic pulmonary valved conduits, data on preoperative preservation time and immunological competence of the patients was not available. Nevertheless, we strongly have the feeling that varying immunological competence in our patients did not have a major impact since we found subclinical thrombus appositions in almost all, i.e. $>90\%$ of the explants. Thus, thrombus formation in bioprosthetic valved conduits appears to be more a general problem rather than a process affecting only patients with specific immunological states.

We agree that the role of preventive measures such as antiplatelet therapy or anticoagulation is still to be determined by future studies.

Matthias Sigler and Thomas Paul

* Corresponding author at: Pediatric Cardiology and Intensive Care Medicine, University Medical Center Göttingen, Robert-Koch-Str. 40, D-37075 Göttingen, Germany.

E-mail address: msigler@wdg.de (M. Sigler).