The interferon-gamma-based QuantiFERON®-TB Gold In-Tube test and the type of haemodialysis process

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In a recent study by Hoffmann M et al. [1], interferon (INF)-gamma-based QuantiFERON®-TB Gold In-Tube test (QFT-G) was found to be a valid alternative to the TST. Nevertheless it remains controversial if the described association is causative for the impaired IFN-γ secretion. Furthermore we advise caution in directly comparing the IFN-γ secretion by different stimulation techniques. These techniques target different cell populations of the innate or adaptive immune system and use distinct activation pathways.

Although we agree with Hursitoglu and colleagues that a direct comparison of the impact of different HD-modalities on the mitogen/TB-specific IFN-γ response may be of interest for the IGRA-assessment, we could not perform such a comparison in our study because all patients were treated with high-flux HD.

The second aspect raised by Hursitoglu and colleagues concerns the timing of the blood sample for the IGRA. As described in the methods section, blood for the IGRA was taken before starting the HD-treatment and before the tuberculin skin test (TST) was applied. This timing aimed to avoid the pro-inflammatory disturbances of the immune system caused by the HD-treatment itself and a potential booster phenomenon through the TST [3].

References

Authors’ reply
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Dear Editor
We are grateful for the comments made by Hursitoglu and colleagues in reference to our article on the use of an interferon-γ release assay (IGRA) in haemodialysis (HD) patients [1]. Indeed the HD-modality – high- versus low-flux HD – might have an additional effect on the immune function. High-flux HD is thought to be more efficacious in removing potential uraemic toxins that possibly jeopardise the immune function. In a recent observational study the ex vivo interferon-γ (IFN-γ) response after stimulation with heat-killed Staphylococcus epidermidis was higher and inversely correlated with β2-microglobulin levels in high-flux HD compared to low-flux HD [2]. Nevertheless it remains controversial if the described association is