

Preclinical cardiac orthotopic xenotransplantation experiments during the COVID19-pandemic: hygienic measures

1) Preprocedural testing

The entire staff is tested twice for SARS-CoV2 RNA in the nasopharynx: The first tests are done two days before initiating the immunosuppressive pretreatment (day -7). Should any person prove positive, the whole experiment will be halted. The second tests are done two days before cardiac xenotransplantation. Should at this time somebody prove positive for SARS-CoV2, this person will be excluded.

2) Teams

Excluding the day of transplantation, we have strictly divided our staff in two fully functional teams. Each team consists of one anesthesiologist, one veterinarian with two years of experience in baboon-studies and one additional scientific staff member with varying experience. The two teams rotate on a daily basis: While one attends to the animal's postsurgical medical treatment and wellbeing, the other takes care of processing samples etc. Contacts between the teams are avoided. The whole team may switch shifts, but team members may not switch from one team to another.

In case of an emergency, one team can be supported by an additional anesthesiologist or surgeon, provided the person wears full protective equipment (ffp2-masks, overall gear, gloves and eye protection).

To exclude the infectious risk to other animals within the facility, animal care keepers are not allowed to the intensive care unit and the cages. The team members of the respective shifts take care of the cleaning also. The animal care keepers provide for supplies and prepare new cages outside the ICU.

3) Infection-protocol

In case of an assumed infection, both teams are tested for Sars-CoV2. The entire team working with the infected person will be quarantined until testing results are obtained (usually within 24 hours); meanwhile, the other team tends for the animal. Both teams are tested again after five days.

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