Oral abstracts

Theme 1 – COVID 19: Challenges for, or impact on, eye banking and corneal transplantation

1 CRISIS BECOMES THE NORM: HOW A NON-PROFIT NETWORK WITHSTANDS THE PANDEMIC

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SARS-CoV-2 (corona virus) presents the world with new kinds of challenges. The crisis mode that persisted in many countries also put a strain on the German health system: on the one hand, through the treatment of patients infected with corona, and on the other hand through the cancellation and postponement of elective operations. This had a corresponding impact on tissue donation and transplantation. The effects of the pandemic-related restrictions can be reflected by the rate of corneal donation in the DGFG network: With the beginning of the first closure in Germany, donation and transplant numbers decreased by almost 25% from March to April 2020. After a recovery during summer, the activities were again restricted from October onwards due to increasing infection numbers. Subsequently in 2021 there was a similar trend.

The already careful screening of potential tissue donors was expanded in accordance with the guidelines of the Paul-Ehrlich-Institute. However, this important measure led to an increase in discontinued donations due to medical contraindications from 44% in 2019 to 52% in 2020 and 55% in 2021 (Status Nov 2021). Nevertheless, the donation and transplantation result from 2019 was exceeded and DGFG was able to maintain patient care in Germany on stable level compared to other European countries. This positive result is partly due to an increased consent rate of 41% in 2020 and 42% in 2021 due to a higher sensitivity in the population to health issues during the pandemic. In 2021, the situation stabilised again, although the number of donations that could not be realised due to corona detection in the deceased continued to increase with the waves of infections that occurred.

Low losses in donation and thus in the supply of transplants for patients seem to be due to the fact that a nationwide network such as the DGFG can respond flexibly to changing requirements. For example, if the number of COVID-19 infections varies between regions, it is possible to react to the local conditions to continue donation and processing where possible and allow allocation to regions where transplantation can take place.

In summary it has been shown that efficient donation programs, resilient network structures, awareness of population for tissue donation and effective precautionary measures ensure a safe patient care with corneal transplants also in pandemic times.

2 IMPACT OF COVID-19 ON A NATIONAL SERUM EYEDROPS PROGRAMME IN THE UK

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NHSBT run a Serum Eyedrops programme for the UK, providing Autologous (AutoSE) and Allogenic (AlloSE) eyedrops for patients affected by severe dry eyes. The service is based within the Eye & Tissue Bank in Liverpool.

In February 2020 (pre-pandemic within the UK) there were 1052 patients on the programme. 34% received AutoSE and 66% AlloSE. Due to a recent change in central funding, referrals for AlloSE had increased, creating a waiting list; in March 2020 the list had 72 patients.

In March 2020 government guidelines were introduced to reduce the spread of COVID-19. These measures presented a number of challenges for NHSBT and our ability to maintain the supply of Serum Eyedrops: i) Many AutoSE patients could not attend donation appointments, as they were clinically vulnerable and needed to shield. This issue was addressed by temporarily providing them with AlloSE. This was done with agreement between patients and consultants. As a result, the proportion of patients receiving AlloSE increased to 82%.

ii) There was a reduced supply of AlloSE donations due to a general reduced attendance at blood donation centres. To deal with this, additional donor centres were recruited to collect AlloSE. In addition, the postponing of much elective surgery during the pandemic meant the demand for blood for transfusion reduced, enabling us to build up stock in anticipation of blood stocks reducing as the pandemic developed.

iii) Our service was also impacted by reduced staffing levels, due to staff needing to shield or self-isolate, and the need to implement workplace safety measures. To address these problems, a new laboratory was created, allowing staff to dispense eyedrops and adhere to social distancing. It was also possible to re-allocate staff from other areas within the Eye Bank due to a reduction in demand for other grafts during the pandemic.

iv) There were initial concerns over the safety of blood and blood products as to whether the transmission of COVID-19 was possible through blood. Following a stringent risk assessment by NHSBT clinicians, and implementation of additional safeguards around blood donation, it was agreed that provision of AlloSE was safe and could continue.

Despite all the challenges created by the pandemic, the measures we implemented enabled us to maintain our SE service for existing patients, provide treatment for new referrals and accommodate a significant increase (25% in the 12 months following the beginning of the pandemic) in the number of patients requiring treatment.

3 EMERGENCY SALVAGE OF TIME EXPIRED CLINICAL CORNEAS DURING THE COVID-19 PANDEMIC

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Introduction Corneas for clinical use can be stored for a maximum of 28 days in organ culture medium after death. At the beginning of the COVID-19 pandemic in 2020 it became apparent that; a rare situation was arising in that clinical operations were being cancelled and that there would be a surplus of "clinical grade" corneas. Consequently, when the corneas reached the end of the storage period, if the tissue had appropriate consent, they were transferred to the Research Tissue