8 THE DONOR OF TOMORROW: CHALLENGES POSED BY THE PANDEMIC, DEMOGRAPHIC CHANGE, AND INCREASED TRANSPLANT REQUIREMENTS

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In the Corona pandemic, the importance of donor health for the supply of patients with high-quality transplants has once again become particularly apparent in the field of cornea donation.

And there are further challenges ahead: Due to new operation methods such as lamellar techniques an earlier stage of disease can be treated hence patients are being operated at younger ages. At the same time, with demographic change, potential donors are getting older.

Therefore, the demand for a high-quality transplant without pre-operations seems to be difficult to fulfil in the future. This is particularly important in the highly developed industrialised countries, where the indications for corneal transplantation are different and the expected quality characteristics are therefore other than in emerging or developing countries, for example. At the same time, the new surgical methods present the tissue banks with new tasks to meet the surgeons' demands.

In the DGFG network, the average age of corneal donors is currently 69.7 years while the requests for transplants with a high endothelial cell density (ECD) increase. The ECD continues to be one of the main criteria for a high-quality cornea and is more likely to be found in younger donors. As mentioned at the beginning, however, the average life expectancy in Germany is already currently around 80 years.

It seems that it is impossible to find the perfect donor of tomorrow. With the increase in the need for high-quality transplants, the question must be asked whether donor shortage is a home-grown problem in industrialised countries. What developments need to be initiated to counter the trend towards donor shortage? Could greater flexibility at the medical and/or regulatory level be a solution? The presentation aims to shed light on these and other questions and would like to discuss this with the experts.

9 SUPPLY OF NON-CLINICAL OCULAR TISSUE FROM A TISSUE AND EYE SERVICES RESEARCH TISSUE BANK

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Introduction NHS Blood and Transplant Tissue and Eye Services (TES) is a human multi-tissue, tissue bank supplying tissue for transplant to surgeons throughout the UK. In addition, TES provides a service to scientists, clinicians and tissue bankers by providing a range of non-clinical tissue for research, training and education purposes. A large proportion of the non-clinical tissues supplied is ocular tissue ranging from whole eyes, to corneas, conjunctiva, lens and posterior segments remaining after the cornea is excised. The TES Research Tissue Bank (RTB) is based within the TES Tissue Bank in Speke, Liverpool and is staffed by two full-time staff. Non-clinical tissue is retrieved by Tissue and Organ Donation teams across United Kingdom. The RTB works very closely with two eye banks within TES, the David Lucas Eye Bank in Liverpool and the Filton Eye Bank in Bristol. Non-clinical ocular tissues are primarily consented by TES National Referral Centre Nurses.

Methods and Results The RTB receives tissue via two pathways. The first pathway is tissue specifically consented and retrieved for non-clinical use and the second pathway is tissue that becomes available when tissue is found to be unsuitable for clinical use. The majority of the tissue that the RTB receives from the eye banks comes via the second pathway. In 2021, the RTB issued more than 1000 samples of non-clinical ocular tissue. The majority of the tissue, ~64% was issued for research purposes (including research into glaucoma, COVID-19, paediatrics and transplant research), ~31% was issued for clinical training purposes (DMEK and DSAEK preparation, especially after COVID-19 cessation of transplant operations, training for new eye bank staff) and ~5% was issued for in-house and validation purposes. One of the findings was that corneas are still suitable for training purposes up to 6-months after removal from the eye.

In 2021, the RTB received 43 applications for ocular projects from new customers and supplied to 36 different projects, meeting 95% of all orders placed this year.

Discussion The RTB works to a partial cost-recovery system and in 2021 became self-sufficient. The supply of non-clinical tissue is crucial for advancement in patient care and has contributed to several peer-reviewed publications.

10 EYE DONATION IN PALLIATIVE AND HOSPICE CARE SETTINGS: PATIENT VIEWS AND MISSED OPPORTUNITIES!

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Eye donation in Palliative and Hospice care settings: patient views and missed opportunities.

Background There is a global shortage of donated eye tissue for use in sight saving and sight restoring operations such as corneal transplantation. In the UK the Royal National Institute of Blind People (RNIB) report that over two million people are currently living with sight loss with this figure predicted to rise to approx. four million by 2050. Patients who die in palliative and hospice care settings could potentially donate eye tissue, however, the option of eye donation is not routinely raised in end-of-life planning discussions. Research evidence suggests that health care professionals (HCP) are reluctant to discuss eye donation as they perceive it as something that will distress patients and family members.

Aim This presentation will share findings regarding the views of patients and carers, including: their feelings and thoughts about the option of eye donation being raised with them; who they think should raise this issue; when this option should be discussed and who should be included in the discussion.

Findings Findings are drawn from the NIHR funded national study: Eye Donation from Palliative and Hospice care contexts: investigating Potential, Practice, Preference and Perceptions (EDiPPPP) in partnership with three palliative care and three hospice care settings in England. Findings indicate high potential for eye donation but very low levels of identification of potential donors; low levels of approach to patients and family members about the option of eye donation; lack of inclusion of eye donation in end-of-life care planning and/or clinical meeting discussions (i.e. Multi-Disciplinary Team (MDT) meetings) and very limited awareness raising initiatives or activity to inform patients and carers of the option of eye donation.

Conclusion It is imperative that patients who would want to be a donor are identified and assessed for eligibility for donation as part of high-quality end of life care. It is clear from studies reported over the past 10 years that not a lot has changed regarding the identification, approach, and referral of potential donors from palliative and hospice care settings, and this is due in part to perceptions held by HCPs that patients would be unwilling to engage in discussions regarding the option of eye donation in advance of their death. This perception that is not substantiated by empirical research.

11 GROWING TOGETHER IN DIVERSITY – INDO-GERMAN COOPERATION ENHANCING EYE DONATION IN NORTH INDIA

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In India, the most densely populated state is Uttar Pradesh in the Northern region. This state has a huge base of corneal blind population due to cornea infections, ocular trauma, and (chemical) burns.

Successful cornea transplantation using human post-mortem donated cornea is a treatment modality. In India lack of availability of donated cornea is a public health challenge. Thus, there is great need to reduce the huge demand and supply gap by increasing the donations for supply of cornea to patients.

The Eye Bank at the Dr. Shroff's Charity Eye Hospital (SCEH) and the German Society for Tissue Transplantation (DGFG) collaborate in a project to enhance cornea donation and eye bank's infrastructure in Delhi. The project is supported by the Hospital Partnerships funding programme which is a joint initiative of Germany's Federal Ministry for Economic Cooperation and Development (BMZ) and the Else Kröner-Fresenius Foundation (EKFS) and carried out by the German Society for International Collaboration (GIZ GmbH).

The project aims to increase the number of cornea donations by the SCEH eye bank through establishing two new eye collection centers where donation is coordinated and that are integrated into the existing and well-established eye bank and donation infrastructure of SCEH. Further, data management of the eye bank will be improved by developing a concept for an electronic database system that allows faster monitoring and evaluation of the processes. All activities are carried out according to a defined project plan. The basis of the project is an open-minded analysis and understanding of processes of both partners in relation to the respective legislations plus the environment and conditions in both countries.

Aside from intercultural exchange and personal contacts both partners benefit from mutual on-site visits and exchanging best practices in eye donation and banking as well as sharing expertise in research topics.

This project is a great example on how strong and sustainable relationships can be build across the globe improving the infrastructure for cornea donations to help corneal blind patients.

12 THE POTENTIAL FOR EYE DONATIONFROM HOSPICE AND PALLIATIVE CARE CLINICAL SETTINGS IN ENGLAND – A RETROSPECTIVE CASE NOTES REVIEW OF DECEASED PATIENT RECORDS

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Background There is a need to identify additional routes of supply for ophthalmic tissue in the UK due to deficits between supply and demand. In response to this need the NIHR funded study, Eye Donation from Palliative and Hospice Care: Investigating Potential, Practice, Preference, and Perceptions) (EDiPPPP) project was developed in partnership with NHSBT Tissue Services (now Organ Tissue Donation and Transplantation).

Aim This presentation will report findings from work package one of EDiPPPP which aimed to: scope the size and clinical characteristics of the potential eye donation (ED) population via a large-scale, multi-site retrospective case notes review across England establishing: the size of the potential ED population; describe the clinical characteristics of the potential ED population and identify challenges for clinicians in applying the standard ED criteria for assessing patient eligibility.

Results Retrospective review of 1200 deceased patient case notes (600 HPC; 600 HPCS) by reviewers (healthcare professionals) at research sites against current ED criteria were then evaluated by specialists based at the National Health Service Blood and Transplant Tissue services (NHSBT-TS). Note review established that 46% (n=553) of 1200 deceased patients notes were agreed as eligible for eye donation (total cases Hospice care settings = 56% (n=337); Palliative care settings = 36% (n=216) with only 1.2% of potential donors referred to NHSBT-TS for eye donation (Hospice care settings = 1.2% (n=4); Palliative care settings = 1.3% (n=3).

Application of the eye donation criteria resulted in an 81% agreement rate outcome for all sites (HPC = 79.2%; HPCS = 82.8%). If cases where there was a difference of assessment but where NHSBT evaluation indicated eligibility are included (n=113) the potential donor pool rises from 553 (46.1% total cases) to 666 (56%) eligible cases.

Conclusions Significant potential exists for eye donation from the clinical sites in this study. This potential is not currently being realised. In view of the predicted increase in need for ophthalmic tissue it is essential that the potential route to increase the supply of ophthalmic tissue