Title: Corneal Donation by Gay Men

Problem Statement:
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A little-known FDA policy instituted in 1993 during the AIDS crisis states that men who have had sex with another man (MSM) in the preceding five years are ineligible to donate their corneas, even when all infectious disease testing is negative. This policy was put in place at a time when our ability to screen for HIV was limited, yet the rule remains in place today even though our ability to test for HIV and other infectious diseases has improved significantly since 1993.

Summary of Facts and Background Information:
No case of HIV transmission through corneal transplantation has ever been reported, even in the ten transplants from HIV-positive donors recorded in the literature. This is largely because corneas are an avascular tissue, and cadaveric studies have consistently concluded that corneas are not a major reservoir for the virus. For example, a study of 90 corneas obtained from HIV-positive people only managed to find HIV antigen in 6 of 90 corneas tested, and a separate study only detected HIV in 4 of 22 corneas collected from patients who died of AIDS. HIV screening tests available in 1993 were unreliable, leading the FDA to institute its MSM exclusion policy banning corneal donation by any man who has had sex with another man in the preceding five years. Canada similarly enforces a twelve-month MSM deferral policy for corneal donation. However in 2020, all corneal donors in the US and Canada must have negative results for three separate and extremely reliable modern HIV tests performed on donor serum: HIV-1 ELISA, HIV-2 ELISA, and HIV nucleic acid testing (which is reliable when performed as soon as 4-8 days after HIV exposure). Reported sensitivities and specificities for these tests are greater than 99.5%. Armed with modern testing and the knowledge that corneal transplants are unlikely to be able to transmit HIV, it is no longer medically justified to exclude MSM donors with negative infectious disease testing for five years after their last sexual encounter.

Neither the FDA, Health Canada, nor the Eye Bank Association of America keep any statistics regarding the number of corneal donors disqualified due to this policy. Therefore, a team led by Michael Puente, MD, at the University of Colorado recently contacted every eye bank in the United States and Canada individually to determine how many corneas were turned away in 2018 due to this policy. Of the 65 eye banks contacted, 25 (38%) were able to provide data. They reported that they collectively turned away 353 referrals in 2018 solely because of MSM status, equating to 706 corneas. Those 25 eye banks represented 44% of the total corneas recovered in the United States and Canada in 2018, allowing us to extrapolate that at least 1600 corneas were turned away from MSM donors in 2018 for no other reason than the donors’ sexual orientation. This is likely a gross underestimate, as many eye banks reported that their MSM deferral data were incomplete.

The FDA subjects MSM donors to harsher scrutiny than other groups considered to be at high risk of having sexually transmitted diseases. For example, the FDA says that a heterosexual person who has had a sexual relationship with someone known to be HIV-positive is only ineligible for one year after their last sexual
encounter with the HIV-infected individual, while MSM donors must be abstinent for five years even if they have never had an HIV-positive sexual partner.

The FDA also defers MSM donors for a longer period prior to corneal donation than other donations. For example, MSM donors can donate blood after only one year of abstinence and can donate organs such as hearts, lungs, livers, and kidneys with no deferral period whatsoever. This is despite the fact that HIV has been repeatedly reported to be transmitted from blood transfusions and through transplantation of vascular organs, but has never been reported from corneal transplants even from HIV-positive donors.

Only three countries consistently recover enough corneas to meet local demand each year: the United States, Italy, and Sri Lanka. All other nations either rely on surplus corneas from these countries or require their patients to wait on often years-long waitlists for a cornea. Recent estimates find that over 12.7 million people worldwide are in need of a corneal transplant. Since the United States exports thousands of surplus corneas across the world each year, the ban on MSM corneal donation directly prevents over 1600 people across the world from receiving vision-restoring surgery each year.

Possible Solutions:

We suggest that the American Academy of Ophthalmology should formally recommend to the FDA that it revisit its outdated policy from 1993. Given that modern infectious disease testing is reliable within days of HIV exposure, there is no reason to continue to disqualify MSM donors for an arbitrary five-year period of abstinence.

Several alternative policies are being safely used by our peer nations and should be considered for implementation in the United States, as well as Canada:

A) The MSM deferral period could be shortened from an arbitrary five years to a period based instead on modern virologic testing. HIV and hepatitis screening are reliable within only 8 and 27 days of viral exposure, respectively. Out of an abundance of caution given the increased rates of sexually transmitted infections in the MSM population, the MSM deferral period could be set at double or triple the window period for modern viral testing. This would result in shortening the current MSM deferral period from an arbitrary five years to a more scientifically based period of 2-3 months. This follows the example of the United Kingdom and France, which only defer MSM corneal donors for 3 and 4 months, respectively.

B) Many other countries, such as Italy, Spain, Portugal, Russia, and Mexico have no deferral policy for MSM donors whatsoever, making no distinction between heterosexual and homosexual donors. Following this example, the FDA could mandate screening procedures which assess all donors for high-risk sexual behavior equally, thereby allowing monogamous MSM donors to donate their corneas but continuing to exclude both heterosexual and MSM donors found to have had sex with people at high risk of having sexually transmitted infections (e.g. prostitution, sex with an HIV-positive partner).

In conclusion, the FDA’s policy banning corneal donation by MSM donors who have been sexually active in the past five years is not evidence-based and is not justified by modern science. The recent estimate that over 1600 corneas are being discarded each year because of this policy suggests that this ban has real-world implications and prevents thousands of patients from receiving vision-restoring surgery. We strongly recommend that AAO petition the FDA to shorten or eliminate its MSM deferral period in light of current scientific evidence.
The Academy agrees with the historic background and original basis of the action as outlined in the CAR for the 1994 Public Health Service (PHS) informal guidelines, eventually codified in 1997 in 21 CFR 1270 as the final donor eligibility rule and delineated in 2007 in the Food and Drug Administration’s (FDA) Donor Eligibility Guidance for Industry. The donor eligibility rule excludes men who have had sex with another man (MSM) within 5 years prior to death from being tissue donors. The authors of the CAR provide evidence that this criterion excludes more than 1600 donors a year without any evidence that they do or do not harbor a relevant communicable disease or disease agent (e.g. HIV, hepatitis B or C).

Recognizing that advancements in serology and nucleic acid testing (NAT) provided assurance that donors carrying HIV, HBV, or HCV could be detected and excluded from the donor pool based on that testing, the FDA and PHS reduced the MSM exclusionary criteria as applied to blood and organ donors to 12 months prior to death. This was done in order to expand the donor pool. However, the 5-year MSM exclusion remains for tissue donors.

The Academy is coordinating with the Eye Bank Association of America (EBAA) in advocating for a change in the MSM exclusion. An FDA liaison attends the EBAA Medical Advisory Board meetings twice a year and EBAA staff meet annually with officials from the Center for Biologics Evaluation and Research (CBER) that regulates tissues.

The EBAA’s last formal comments submitted to FDA on this topic were in December 2017 (attached). They support reduction of the exclusionary window to 12 months, consistent with other organ and blood donor regulations. The FDA’s stated rationale for being more conservative with tissue donors is that MSM remains a significant risk factor for HIV and hepatitis and that the donor risk questions are answered by a family member who may not know the deceased’s behaviors, although this ignores the ability of current serology and NAT protocols to detect donors at risk of disease transmission.

At the annual liaison meeting in February 2017, the EBAA reiterated the position that the exclusion for historical risk factors such as MSM should be reduced from
5 years to 12 months in light of serologic and NAT donor screening. The FDA response was typically non-committal, reserving comment for proposed rulemaking and industry guidance documents.

Options
The Academy agrees with the CAR and the EBAA that the MSM exclusion should be revised. In considering how to approach the FDA about changing the exclusion, it is important to understand that they operate on the precautionary principle. Risk tolerance at FDA is extremely low as long as regulations do not impact the tissue supply in the United States. Tissue availability in other countries, costs related to increased testing requirements and false positives, and perceived differential treatment of donors based on sexual orientation do not enter into the FDA’s calculus as long as there is an adequate supply of tissue in the United States.

1. Advocate for elimination of the MSM exclusion for tissue donors based on the availability of adequate serology and NAT screening. This seems unlikely to succeed based on FDA’s risk tolerance.
2. The AAO would recommend support for EBAA’s position requesting a reduction of the MSM exclusionary period to 12 months, consistent with the blood and organ regulations by continuing to coordinate with them. This has a greater chance of success.

Potential avenues of collaboration with EBAA include letters of support to EBAA and/or FDA, joining EBAA in formal comments, and in-person participation in liaison meetings.

References