OPTN Ethics Committee
Normothermic Regional Perfusion (NRP) Workgroup
Meeting Summary
September 8, 2022
Conference Call

Keren Ladin, PhD, Chair

Introduction

The Normothermic Regional Perfusion (NRP) Workgroup met via Citrix GoToMeeting teleconference on 09/08/2022 to discuss the following agenda items:

1. Discussion with European Colleagues
2. Timeline and Upcoming Meetings

The following is a summary of the Workgroup's discussions.

1. Discussion with European Colleagues

The Chair provided a brief background of the presentation that the Ethics Committee received in March 2022 from colleagues representing the European Society of Organ Transplant (ESOT). The focus of that presentation and discussion was the importance of public trust, honoring donor family wishes, the potential for monitoring for brain activity, defining death, and sharing models of growth. The guests were asked a series of questions to share insight on some of the main topics that the workgroup has discussed.

Summary of discussion:

What's changed in your countries with NRP since March?

In Spain, NRP is a widely accepted practice and the primary procurement method for transplantation, noting the use of both controlled and uncontrolled NRP. Recently, there was a successful multi-visceral NRP transplant. Additionally, Spain is considering euthanasia, which is not an NRP issue but an ethical issue that could have an impact on transplant.

In the United Kingdom, NRP transplants are increasing with an additional transplant center in training and one more transplant center fully engaging in NRP since March. Additionally, the UK is increasing the utilization of livers that would not have previously been accepted without NRP. There are still concerns about assessing brain function and activity, while it is not meaningful activity it is still difficult to fully assess. The presenter noted when ligating the arteries and draining the vessels there is no circulation or blood flow making perfusion of the brain unfeasible, comparing it to a bucket with a hole that could never allow the bucket to be filled.

A member pushed back that this description was extremely gruesome and likened it to decapitation and was not confident of nonmaleficence to the donor. The Chair noted that the workgroup is less concerned about the utility of NRP and more concerned with ensuring no harm is done to the donor. The presenter inquired if the workgroup has considered a reevaluation of the dead donor rule as a result of the evolution in practice over the past few decades. A member responded that while the purpose of the dead donor rule is to mitigate patient harm, and it is possible that patient harm is not occurring in

the NRP protocol, the political climate in the US would make it very challenging to revise the dead donor rule in a manner that would elicit widespread support.

A member enquired if Spain had more legal flexibility in how death is defined compared to the US. The presenter noted that while the Uniform Determination of Death Act in the US is very limited, the legal definition of death in Spain is much more extensive and detailed. The sentiment from donor families is a willingness to donate even if the legal definition of death were not as extensive as it currently is. With that being said, due to the extensive legal definition in Spain, there is no violation of the dead donor rule. A member opined that this could lead to a slippery slope and needs stronger guidelines to protect patients. The presenter noted that every attempt is made to keep the patient alive until the family decides to withdraw life support irrespective of any consideration for organ donation. The discussion to pursue donation does not occur until after the family has decided to withdraw care. Furthermore, there is no concern or question of 'permanence' surrounding the declaration of death in Spain.

A member inquired if a key difference between the European and American perspectives on NRP is in the US the onus is on the clinical team to show that no harm is done, whereas in Europe it is the responsibility of the critic to provide proof of harm. The presenter pushed back that using the term 'killing' is a misleading representation of a widely accepted clinical practice of withdrawing life-sustaining care as the wishes of the family.

Furthermore, due to discussions at the International Society for Heart and Lung Transplant (ISHLT) conference, the UK has removed pancuronium from their NRP protocol over concern for adverse impact on the lungs. Currently, in the UK is low utilization of lungs from NRP donors despite positive outcomes. A member inquired about the acceptance of NRP by non-white and minority populations. The presenter noted that the majority of organ donors in the UK are Caucasian but there have not been instances of apprehension from the public, rather donor families are pleased that their loved one's decision is fulfilled.

Any unforeseen circumstances or edge cases?

With the previous reference to euthanasia, the Chair highlighted the former work the Ethics Committee did regarding imminent death donation and the importance of separating the decision to end one's life and the decision to donate their organs. A presenter noted the variability in end-of-life support comfort care and lack of consistency. In the US, it is extremely common to provide patients with propofol as part of comfort care prior to donation, whereas the presenters noted the administration of propofol would inhibit the ability to proceed with organ donation.

Efforts to educate the public or provide consistent protocols? Have those efforts succeeded?

A member inquired if the informed consent process for NRP included reference or discussion of ligating vessels. A presenter responded that this is not a standard item on the informed consent in Spain, especially since Spain has an opt-out model for organ donation so the law supports proceeding with donation. There can sometimes be challenges with uncontrolled NRP in Spain, where patients arrive in the ER and are often not accompanied by family. Since Spain has an opt-out model, clinicians will proceed to efforts to cannulate the patient in support of donation and halt the practice if the family arrives and does not feel comfortable with proceeding with donation.

A member inquired if there was any variation between the informed consent for standard donation after circulatory death (DCD) and NRP. The presenter from Spain responded that since NRP is the primary method of procurement for patients who experienced circulatory death with 'standard DCD' being a minority procedure. The presenter added that there is no difference in informed consent and highlighted the similar invasiveness between the two procedures. In the UK, the informed consent does

not explicitly state that the aorta will be clamped, but they do inform the donor and families that the heart will be restarted but there will be no perfusion of the brain.

Any challenges with communication or issues of moral distress among physicians?

The Chair inquired about any moral distress or opposition within the hospital system and from clinicians specifically. A presenter shared that the only moral distress in donation in Spain is regarding donation after euthanasia, but there is no concern amongst clinicians about NRP. In the UK, the clinicians often feel more comfortable with NRP since it is not as rushed of a process as a standard procurement. Alternatively, the NRP procedure takes over two hours and has been considered to be more respectful of the donor. The presenter shared that in the UK there has not been any moral distress or concern that the donor is not deceased by the time the cannulation occurs. The presenter recommended discussing this with a nurse or donor coordinator in the UK who engages in these discussions with donor families.

2. Timeline and Upcoming Meetings

The Chair reviewed the upcoming workgroup and subgroup meetings. A member requested the subgroup rosters be sent out to ensure that a diverse perspective is shared at each subgroup meeting.

Upcoming Meetings

- September 22, 2022
- October 13, 2022
- October 27, 2022

Attendance

- **Workgroup Members**
  - Andy Flescher
  - Bob Truog
  - Carrie Thiessen
  - Erin Halpin
  - Jonathan Fisher
  - Julie Spear
  - Keren Ladin
  - Lainie Ross
  - Sanjay Kulkarni
  - Sena Wilson-Sheehan
- **HRSA Representatives**
  - Edna Dumas
  - Jim Bowman
- **SRTR Staff**
  - Bryn Thompson
- **UNOS Staff**
  - Cole Fox
  - James Alcorn
  - Kim Uccellini
  - Kristina Hogan
  - Laura Schmitt
  - Meghan McDermott
  - Stryker-Ann Vosteen
- **Other Attendees**
  - Amelia Hessheimer
  - Chris Watson
  - Joel Wu
  - John Dark