OPTN Ad Hoc Disease Transmission Committee
Endemic Diseases Workgroup
Meeting Summary
May 3, 2022
Conference Call

Ricardo La Hoz, MD, FACP, FAST, FIDSA, Chair
Lara Danziger-Isakov, MD, MPH, Vice Chair

Introduction

The OPTN Ad Hoc Disease Transmission Advisory Committee Endemic Diseases Workgroup (the workgroup) met via Microsoft Teams teleconference on 05/3/2022 to discuss the following agenda items:

1. Tuberculosis risk factors and testing

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

1. Tuberculosis risk factors and testing

The CDC Division of Tuberculosis Elimination presented on risk factors for tuberculosis and available testing, followed by workgroup discussion.

CDC presentation:

The CDC presenter stated high risk factors for tuberculosis include:

- Born, lived, or traveled, or traveled in countries where TB is common
- Had known exposure to pulmonary TB disease
- Lived or worked in homeless shelters, correctional facilities, nursing homes, or other settings at higher risk for TB transmission

The presentation highlighted those who are immunocompromised (such as transplant recipients) are at higher risk for developing TB once exposed. The estimated prevalence of latent TB infection is 2.7%-5% in the U.S.

The presentation discussed limitations of testing. IGRA tests may result in false negatives and have a high level of indeterminate results. Smear tests have false negatives and cross reactivity with non-tuberculosis mycobacteria. NAAT tests have false negatives as well and are limited. Culture tests can take 6-8 weeks.

Key takeaways:

- Complete evaluation for TB disease requires a thorough history, physical exam, chest radiograph, test for TB infection, and mycobacteriologic testing
- Culture remains the gold standard for diagnosing TB disease
- AFB smears and NAATs can expedite diagnosis

- IGRAs may be useful for screening organ donors for TB infection and disease, but they have limitations:
    - A negative IGRA does not reliably exclude TB infection or disease
    - Data are limited on IGRA performance in deceased organ donors and critically ill patients
    - Indeterminate results will likely be frequent if IGRAs are used for donor screening
- TB testing can inform recipient management even if results return after transplant

2. Discussion

The CDC presenter facilitated discussion on how screening of organ donors for tuberculosis can be improved.

Summary of discussion:

Members discussed the need for a better risk assessment calculator. The CDC epidemiologist stated there are all sorts of subgroups for TB disease instance that are the best proxy, even though they do not encapsulate everything. A member stated the best a risk calculator could do would give insight into what donor would be higher risk and should be tested. The Chair pointed out there are only 7 instances of active tuberculosis per 100,000 persons which gives an indication of pretest probability. A CDC representative stated latent tuberculosis is much more prevalent and pretest probability is still substantial even regarding active tuberculosis.

A member stated testing low respiratory tract samples via Smear testing for a select donor population would go much farther in terms of safety than we are now. The Chair acknowledged the best marker we have is risk factors presented from the non-U.S. born population. The Chair also noted when looking at the analysis of latent TB in organ donors, it needs to include what happens to organs from donors that test indeterminant, which proves to be an important consequence of this level of testing. The Chair argued the rate of active TB is low, and if we test every donor the proportion of true positives to false positives will be relatively small, and that the long turnaround time and large number of indeterminate results could result in discarded organs. Identifying risk factors is important, along with the education regarding risk factors and potential for active TB in donors.

A member proposed limiting testing to lung donors with history of incarceration, homelessness, or foreign birth. These donors would receive PCR tests and cultures for TB, with results that could be available after transplant. Another member emphasized the importance of differentiating latent TB from active TB. A member voiced concern about educating the transplant community how to interpret and deal with results, and the Vice Chair agreed. Members were unsure as to how many donors would be subject to laboratory tests based on risk factors, and staff will follow up with Committee leadership on how to provide an estimate to the workgroup.

Next Steps:

The workgroup will continue this discussion on a future call. The Chair specifically requested OPO member feedback on the feasibility of TB testing for deceased organ donors.

Upcoming Meetings

- May 23, 2022

Attendance

Workgroup members:

- Ann Woodley
- Debbie Levine
- Dong Lee
- Emily Blumberg
- Gary Marklin
- Helen Te
- Jason Goldman
- Kelly Dunn
- Lara Danziger-Isakov
- Michelle Kittleson
- Ricardo La Hoz
- Sam Ho
- Sarah Taimur

HRSA Representatives

- Marilyn Levi

FDA Representatives

- Brychan Clark

CDC Staff

- Ian Kracalik
- Noah Schwartz
- Pallavi Annambhotla
- Rebecca Free
- Sridhar Basavaraju

UNOS Staff

- Cole Fox
- Courtney Jett
- Susan Tlusty