

Letter to the Editor

Donor-Derived Tuberculosis (TB) Infection in Lung Transplant Despite Following Recommended Algorithm

To the Editor:

We describe a case of donor-derived TB infection in a lung transplant despite following a recently recommended algorithm for screening and management of deceased donor candidates (1).

A 58-year-old man (case-patient) with negative tuberculin skin testing (TST) underwent a double lung transplant in July of 2012 for COPD. The deceased donor was a 42-year-old Vietnamese man who emigrated to the United States in 1988 and had died of acute intracranial hemorrhage. The donor did not have any history of TB or positive TST. An ante-mortem CT of the chest showed no infiltrates or granulomas in the lungs. We did not administer TB prophylaxis to the lung transplant recipient based on AST guidelines on diagnosis and management of TB in transplant donors (1). The case-patient developed a cough with a new right pulmonary infiltrate on chest radiograph on posttransplant day 90. He underwent bronchoscopy with BAL which grew pan-susceptible *Mycobacterium tuberculosis*. All family contacts were well and tested negative for latent TB. The isolate was sent to Ohio Department of Health and to CDC for genotyping.

There were three other recipients of solid organs from this donor: two kidney recipients with subsequent negative urine mycobacterial surveillance cultures who were both placed on INH prophylaxis; a liver recipient with a negative TST whose posttransplant liver biopsy specimen showed mild rejection and the clinical team decided against TB prophylaxis. The case-patient is being treated successfully with standard anti tuberculosis therapy.

The genotype of the isolate did not match any TB isolates previously reported in Ohio. Thirty cases matching the spoligotype (Indo-Oceanic lineage) have been reported in the US, 29 of which were among foreign-born persons from Vietnam or Cambodia (personal communication with CDC).

Donor-derived TB in organ transplant recipients in the United States is rare (1–3). There are no current estimates available for the number of organ donors in the United States who belonged to a high-risk TB endemic area. It is likely that with the rising immigrant population, the number

of immigrants who are potential donors will also increase. In one other case report of tuberculosis transmission via lung transplantation, the authors were able to match the TB isolate to Guatemala, the country of origin of the deceased donor (4). We are in the process of submitting another case from our institution of a donor-derived TB in a lung transplant recipient where the donor was a Colombian immigrant (personal communication with Dr. C. Miranda and CDC).

Current guidelines recommend chemoprophylaxis only in lung transplant recipients if the deceased donor is deemed high TB risk by history or if images suggest old TB and AFB smears are negative (1). Current screening pathways do not classify donors born in high-incidence TB countries to be high risk for transmission of TB based on their country of origin. Our case highlights the need for a heightened index of suspicion for donor-derived infections based on the geographic history of the donor, regardless of the results of pretransplant screening. Current United Network for Organ Sharing (UNOS) data classify donors as US citizens or noncitizens. The subset of high-risk immigrant donors cannot be estimated from this national database as some donors born in TB endemic areas may be naturalized US citizens. We feel that the country of origin of all donors should routinely be a part of the medical record of the recipient. This should help alert clinicians of risk of donor-derived infections including TB in the recipients of organs especially lungs.

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Disclosure

The authors of this manuscript have no conflicts of interest to disclose as described by the *American Journal of Transplantation*.

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