

## **A NEW CHAPTER IN AN EVOLVING PANDEMIC: SUCCESSFUL PEDIATRIC LIVER TRANSPLANTATION WITH COVID+ DONORS**

Goss, Matthew B<sup>1</sup>, Flor M Munoz<sup>2</sup>, Elizabeth A Moulton<sup>2</sup>, Stephanie M Pouch<sup>3</sup>, Sarah Koohmaraie<sup>4</sup>, Nicolas F Moreno<sup>5</sup>, John A Goss<sup>6</sup>, N. Thao N Galván<sup>6</sup>

<sup>1</sup> Baylor College of Medicine, Department of Other

<sup>2</sup> Baylor College of Medicine, Pediatrics, Infectious Diseases

<sup>3</sup> Emory University School of Medicine, Pediatrics, Infectious Diseases

<sup>4</sup> Texas Children's Hospital, Pediatrics, Liver Transplantation Service

<sup>5</sup> McGovern Medical School, University of Texas Health Science Center at Houston, Medical Student, 3rd Year

<sup>6</sup> Baylor College of Medicine, Michael E. DeBakey Department of Surgery, Abdominal Transplantation

**Keywords:** COVID-19, Donor Pool Expansion, Transplant

**Background:** We report the first two pediatric liver transplants utilizing allografts from COVID+ donors, infected at time of organ procurement, demonstrating a pivotal step toward donor pool maximization amid a viral pandemic with poorly understood transmissibility in the pediatric patient.

**Materials/Methods:** This is a prospective and retrospective review of two pediatric liver transplants and their donors who tested positive for SARS-CoV-2 at time of procurement. Data was obtained through the electronic medical record system and UNet DonorNet platform.

**Results:** The first donor is a 3-year-old male succumbing to head trauma. 1 of 5 nasopharyngeal swab RT-PCR tests demonstrated COVID-19 positivity while 1 of 3 bronchoalveolar lavage RT-PCR tests indicated SARS-CoV-2 infection. Preceding procurement in the second donor, a 16-month-old male with unknown etiology of cardiorespiratory arrest, 2 nasopharyngeal swab RT-PCR tests and 1 bronchoalveolar lavage RT-PCR test failed to detect SARS-CoV-2 infection. Diagnosis was not made until the Medical Examiner's office repeated a nasopharyngeal swab RT-PCR and archive plasma RT-PCR which were both positive for SARS-CoV-2. The two 2-year-old pediatric liver recipients underwent transplantation in November 2021. Continued follow-up demonstrates successful transplant void of viral transmission or hepatic artery thrombosis as liver chemistries have anticipatorily normalized with excellent graft function. One recipient's course was complicated by early portal vein thrombosis that was recannulated on postoperative day (POD) 5 by thrombectomy and angioplasty with discharge on POD 20.

**Conclusions:** This report is the first to describe successful pediatric liver transplants from COVID+ donors. These data reinforce case reports in the adult transplant population of successful use of COVID + donor organs and further supports the judicious use of COVID+ donors for extrapulmonary pediatric organ transplantation. The concern for donor-derived transmission must now be weighed against the realized benefit of successful, life-saving transplant for end stage liver disease in the pediatric patient.

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