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Simultaneous Vertical Sleeve Gastrectomy And Deceased Donor Liver Transplant In A Pediatric Patient With Cirrhosis And Class 3 Obesity

Lakshmi Kunam
Children's Mercy Kansas City

Voytek Slowik
Children's Mercy Hospital

Brooke Sweeney
Children's MercyHospital

Ryan T. Fischer
Children's Mercy Hospital

Jason D. Fraser
Children's Mercy Kansas City

See next page for additional authors

Authors

Lakshmi Kunam, Voytek Slowik, Brooke Sweeney, Ryan T. Fischer, Jason D. Fraser, Bhargava Mullapudi, and Richard J. Hendrickson

SIMULTANEOUS VERTICAL SLEEVE GASTRECTOMY AND DECEASED DONOR LIVER TRANSPLANT IN A PEDIATRIC PATIENT WITH CIRRHOSIS AND CLASS 3 OBESITY

Kunam, Lakshmi; Sweeney, Brooke; Fischer, Ryan T; Campbell, Neal; Fraser, Jason D; Mullapudi, Bhargava; Hendrickson, Richard; Slowik, Voytek

Children's Mercy - Kansas City

Background

- Liver transplantation is a lifesaving procedure for children with end-stage liver disease with the goal of returning to a normal healthy life
- Obesity and weight gain can lead to post-transplant steatosis and contribute to patient morbidity and mortality
- In patients with obesity, simultaneous bariatric surgery can lead to reduced body mass index (BMI) and decrease allograft steatosis in patients with metabolic syndrome

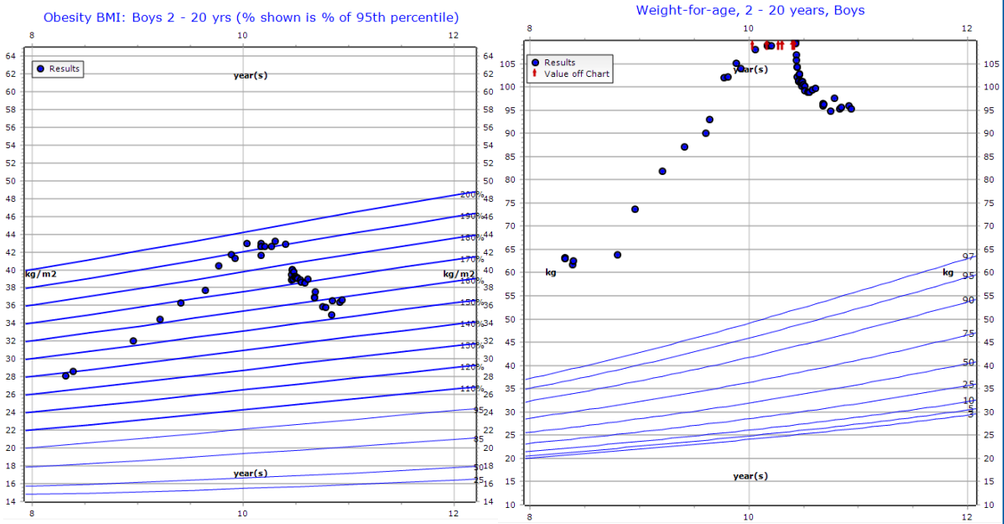
Methods

- After obtaining patient and family assent/consent, patient records were reviewed and analyzed.

Case Presentation

- 8 year old male presented with right upper quadrant pain, imaging consistent with cirrhosis and portal hypertension, and positive hepatitis C
- Despite treatment and clearance of the hepatitis C virus, developed decompensated cirrhosis with hepatopulmonary syndrome
- A deceased donor orthotopic liver transplantation was performed at age 10
- A simultaneous vertical sleeve gastrectomy was required due to class 3 severe obesity with comorbidities

CDC Growth Charts



Pre-Operative CT Scan

Post-Operative Course

- Complicated by increased oxygen requirements that resolved within 2 weeks
- No staple line or gastric bleeding issues were noted
- Two months after transplant, has good graft function with normal liver function tests on tacrolimus with mycophenolate mofetil
- He has had a 9.4% reduction from his peak BMI of 42.97 kg/m2 to 38.92 kg/m2 with weight stabilization post-operatively despite pulse steroids followed by an oral steroid taper for induction immunosuppression
- Approaching 1 year post-operatively, has had no nutritional complications following bariatric surgery and no major complications from transplant

Conclusion

- Our experience demonstrates that liver transplant and vertical sleeve gastrectomy can be done concomitantly and safely in the pediatric population.
- Assessing the long-term outcomes of this and other similar patients will assist in determination of optimal patient selection, target and actual BMI reduction, and metabolic goals in the pediatric liver transplant population

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