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Title: Ventilatory management in patients after intestinal transplantation

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Body: Intestinal transplantation (IT) is a life-saving therapy for the patients with intestinal failure. However, ventilatory management of intestinal transplant recipients in the immediate post-operative period is difficult and challenging. Therefore, our aim was to establish the criteria for postoperative extubation, identify risk factors for prolonged ventilator needs. We conducted an observational, prospective clinical trial and performed retrospective chart reviews of 7 patients receiving IT between 2007 and 2012 at Far Eastern Memorial Hospital. The patients were divided into two groups; 3 patients were not successfully extubated within 72 hours of the IT operation (ventilated, V) and 4 were (extubated, E). The median age and weight in the V group were significantly lower than the E group, 9.67 yrs vs. 28.25 yrs and 23.33 kg vs. 36.75 kg respectively. When compared to the E group, congenital Hirschprung's disease as cause of intestinal failure, preexisting respiratory disease, severe acute rejection, immunosuppressive level and longer operation time were more common in the V group. The consequences of not being extubated within 72 hours were increased number of chest radiographs (median 40 for V and 9.5 for E), blood gas draws (median 120 for V and 10 for E,) and length of stay in the ICU (median 31 days for V and 9 days for E). IT has evolved into a therapeutic option, with an overall patient and graft survival rate of 100%. Younger IT recipients were less likely to be extubated within 72 hours of IT operation. Hirschprung's disease, preexisting respiratory disease, severe acute rejection, immunosuppressive level and longer operation time appear to have an impact on ability to extubate.