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Title: Lung complications after liver transplantation in children: The Swiss experience

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Body: Background: Liver transplantation (LT) has become the treatment of end-stage hepatopathy. No recent data are available on pulmonary complication after LT in children, despite advances in LT management. As Geneva is the LT national center, we studied pediatric pulmonary complications, in order to identify pre and per operative risk factors. Methods: We retrospectively included all children requiring LT from 2000 to 2011. We recorded patient and donor characteristics, cardio-pulmonary evaluation, operative data, post-operative management and outcome. Results: 72 children underwent 82 LT (3.4 ±4.6 years old), because of biliary atresia (n=32), other cholestasis (n=16), fulminant hepatic failure (n=6), metabolic disorder (n=14), neoplasia (n=3), other cirrhosis (n=7) and graft rejection (n=4). To date, data from 37 LT were recorded. Pre-operative assessment showed portal hypertension (n=22), hepato-pulmonary syndrome (n=1), encephalopathy (n=9), ascites (n=24) renal failure (n=4) and no pulmonary hypertension. Early post operative (<1 month) lung assessment showed pulmonary edema (n=16), pleural effusion (n=22, including 5 requiring drain), atelectasia (n=14), infection (n=3), but no pulmonary hemorrhage, pneumothorax, or diaphragmatic paralysis. No delayed (1-3 months) lung complication occurred. In long term (>3 months) pulmonary follow-up, pneumonia (n=3), extrinsic alveolitis (n=1), central and obstructive apnea (n=1) were observed. 4 patients died but not because of lung-related cause. Conclusion: The incidence of pulmonary complications after LT seems to decrease compared with older published cohorts, and will be better understand and prevent through the further analysis of potential risk factors.