

OUTCOMES OF LAPAROSCOPIC KASAI PORTOENTEROSTOMY FOR BILIARY ATRESIA: A SYSTEMATIC REVIEW

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Aims of the study: Biliary atresia is a rare disease of infancy for which mainstay of treatment consists of open Kasai portoenterostomy. The aim of this review was to assess the outcomes of a relatively novel approach, laparoscopic Kasai portoenterostomy, in comparison to current conventional management. Outcomes identified were native liver survival rates, actuarial survival rates, post-operative cholangitis rates and incidence of adhesions at subsequent liver transplantation.

Methods: A comprehensive systematic literature search was conducted in the PubMed and COCHRANE databases. The keywords used were: hepatic portoenterostomy, biliary atresia, and laparoscopy. Studies looking at robotic Kasai portoenterostomy were excluded.

Results: Ten studies were included in this review with 140 patients who underwent laparoscopic Kasai procedures. The mean age at time of operation was 66.6 days (range 14-108). The mean operative time was 227 minutes (range 120-435). The mean native liver survival rate was 56.7% (range 33.3-77.8) at 6 months and 40.5% (range 8.33-75%) at 2 years. Mean actuarial survival rate was 95.2% (range 91.1-100%) at 6 months and 78.5% (range 54.4-100%) at 2 years. The rate of post-operative cholangitis was 50% (range 11.9-50%). Adhesions at subsequent liver transplantation was only reported in 4 patients, 2 of which had dense adhesions and 2 of which had no adhesions.

Conclusions: Although laparoscopic Kasai portoenterostomy is a feasible operation, the outcomes in terms of native liver survival rates and actuarial survival rates are unfavourable when compared to current conventional treatment. There is also no evidence from this review that laparoscopic Kasai is associated with less adhesions at subsequent liver transplantation.

Laparoscopic Kasai should not be used for the treatment of patients with biliary atresia and should be restricted to the remit of further research studies. Further prospective trials are needed to clearly delineate the outcomes of laparoscopic Kasai.