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# Systematic review of factors for hepatic fibrosis in biliary atresia

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## ADMINISTRATIVE INFORMATION

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**Review Stage at time of this submission -** Completed but not published.

**Conflicts of interest -** None declared.

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**Amendments -** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 May 2024 and was last updated on 12 May 2024.

## INTRODUCTION

**Review question / Objective** This study systematically reviewed our team's research on the mechanism and assessment of liver fibrosis in BA, summarized our experience, and discussed the future development direction.

**Condition being studied** Compared with other neonatal cholestatic diseases, the pathogenesis of biliary atresia (BA) hepatic fibrosis is more unique and complex, the disease progresses rapidly, and there is no effective treatment in the clinic. Therefore, understanding the pathogenesis of BA may offer crucial insights for developing novel treatment targets and strategies.

## METHODS

**Search strategy** Pubmed and Wanfang databases were searched from the establishment of the database to January 1, 2024. The MeSH keywords covered "Biliary Atresia", "Liver Cirrhosis" and related free words, and Jianghua Zhan was included in the author. We use the Boolean operator "OR" to connect subject words with free words to extend the search criteria. Then, we connect individual subject words via the Boolean operator "and" to determine the search scope.There are no restrictions on the language and publication status of the paper.

**Participant or population** Biliary atresia patients.

**Intervention** None.

**Comparator** None.

**Study designs to be included** We included cohort studies, case-control studies, among others, to provide evidence on intervention effects or risk factor associations.

**Eligibility criteria** Inclusion criteria included: articles related to the mechanism of liver fibrosis in BA and articles related to the assessment of liver fibrosis in BA. Meanwhile, the criteria used to exclude studies were as follows: case reports, guidelines, reviews, expert commentary, and articles with inconsistent content.

**Information sources** Pubmed and Wanfang databases.

**Main outcome(s)** (1) Molecules associated with the degree of liver fibrosis and their corresponding P and r values.
(2) Grading criteria for hepatic fibrosis in biliary atresia.
(3) The potential diagnostic molecules of BA liver fibrosis and the following data were extracted: detection method, sample source, cut-off value, sensitivity, specificity, and area under the curve (AUC) value.

**Data management** Endnote.

**Quality assessment / Risk of bias analysis** None.

**Strategy of data synthesis** None.

**Subgroup analysis** None.

**Sensitivity analysis** None.

**Language restriction** There are no restrictions on the language.

**Country(ies) involved** China.

**Keywords** Biliary atresia (BA); Hepatic fibrosis; Grading; Systematic review.

**Contributions of each author**
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Author 2 - Shaowen Liu - Author 2 contributed to the conception and design, data extraction, manuscript writing, and final approval of manuscript.
Author 3 - Yu Meng - Author 3 contributed to the data extraction, manuscript writing, and final approval of manuscript.
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