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17TH ANNUAL CHILD HEALTH RESEARCH DAYS

Nutrition for a Changing World

The Science of Nourishing the Next Generation

CHRD 2021: Abstract & Poster Submission Form

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Research Category:

- Basic Science
- Clinical
- Community Health / Policy

What was your role in the project?

- Design
- Perform Experiments
- Analyze Data
- Write Abstract

Presenter Status:

- Undergraduate Students
- Masters Student
- PhD Student
- Post-Doctoral Fellows
- Residents
- Non-Trainee

Title

Congenital lung malformation patients experience respiratory dysfunction after resection: A population-based cohort study

Background

The benefit of elective resection of asymptomatic congenital lung malformations continues to be debated.

Objective

Our study aimed to determine if, after resection, congenital lung malformation patients experienced more respiratory dysfunction by 10 years of age compared to controls without a history of congenital lung malformation.

Methods

We performed a retrospective cohort study of children born from 1991-2007 who underwent congenital lung malformation resection. Patients were identified from Winnipeg's Surgical Database of Outcomes and Management (WiSDOM), and a 10:1 date-of-birth matched control group was generated from a population-based administrative data repository. International Classification of Disease codes and Anatomical Therapeutic Chemical classifications were used to assess diagnosis and medication use outcomes, respectively.

Results

We included 31 congenital lung malformation cases and 340 controls. Cases consisted of 14 (45.16%) congenital pulmonary airway malformations, 9 (29.03 %) bronchopulmonary sequestrations and 8 (25.81%) hybrid lesions. From 0-5 years of age, cases showed a higher risk of 'Pneumonia' (RR 2.64, 95%CI: 1.26, 5.54) and 'Other diseases of the lung' (i.e., chronic respiratory failure and pulmonary insufficiency) (RR 49.33, 95%CI: 5.82, 418.47). In children aged 5-10 years, cases had an increased risk of 'Pneumonia' (HR 3.69, 95%CI: 1.60, 8.54).

Conclusion

Our data demonstrate that after resection of a congenital lung malformation, children are at greater risk of respiratory diseases in the first 10 years of life compared to the general population. Resection does not eliminate the risk of pulmonary dysfunction; therefore, parental counseling should include the risk for ongoing pulmonary dysfunction after surgery.

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- For each author, please click "[+] Add Item" and provide the author's information

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