



Background

Cystic Fibrosis (CF) affects ~4300 patients in Canada

- The affected gene codes for the cystic fibrosis transmembrar conductance regulator (CFTR)
- A transmembrane protein at the apical membrane of epith
- CFTR dysfunction disrupts ion transport at the airway imparts clearance of mucous and debris and allowing opportunistic to thrive
- Pseudomonas aeruginosa (Paeruginosa) is a common oppo pathogen in the CF population affecting ~40% of Canadian
- Chronic colonization increases morbidity and mortality Since 1995, BC Children's Hospital (BCCH) treated a first P growth with IV antipseudomonal antibiotics for 2 weeks, PO for 3 weeks and inhaled colistin for 6 months
- In 2014 a new outpatient eradication protocol was implement

Outpatient Eradication Protocol

- Ciprofloxacin 20 mg/kg/dose BID by mouth daily for 3 weeks Tobramycin 300 mg BID inhaled for 4 weeks
- *Patients that were unwell at isolation were admitted for 2 weeks of IV antipseudom

Purpose

To assess the efficacy and safety of the new *P* aeruginosa erac protocol implemented at BCCH in 2014

Outcomes

Primary: Rate of successful *P* aeruginosa eradication defined culture after a minimum 7 days post eradication protocol

Secondary:

- Describe adverse events
- Time to regrowth within 12 months
- Change in BMI percentile pre and post eradication
- Change in lung function (FEV₁ % predicted) pre and post era
- Change in number of pulmonary exacerbations 12 months p eradication

Methods

Design: Single centered, retrospective observational review

Inclusion: Confirmed CF diagnosis, first positive growth of P a received new eradication protocol between December 2014 an 2019

Exclusion: Chronic *P aeruginosa* colonization, chronic inhaled *P aeruginosa* suppression, received different protocol and did follow up cultures

Statistical Analysis: Descriptive statistics





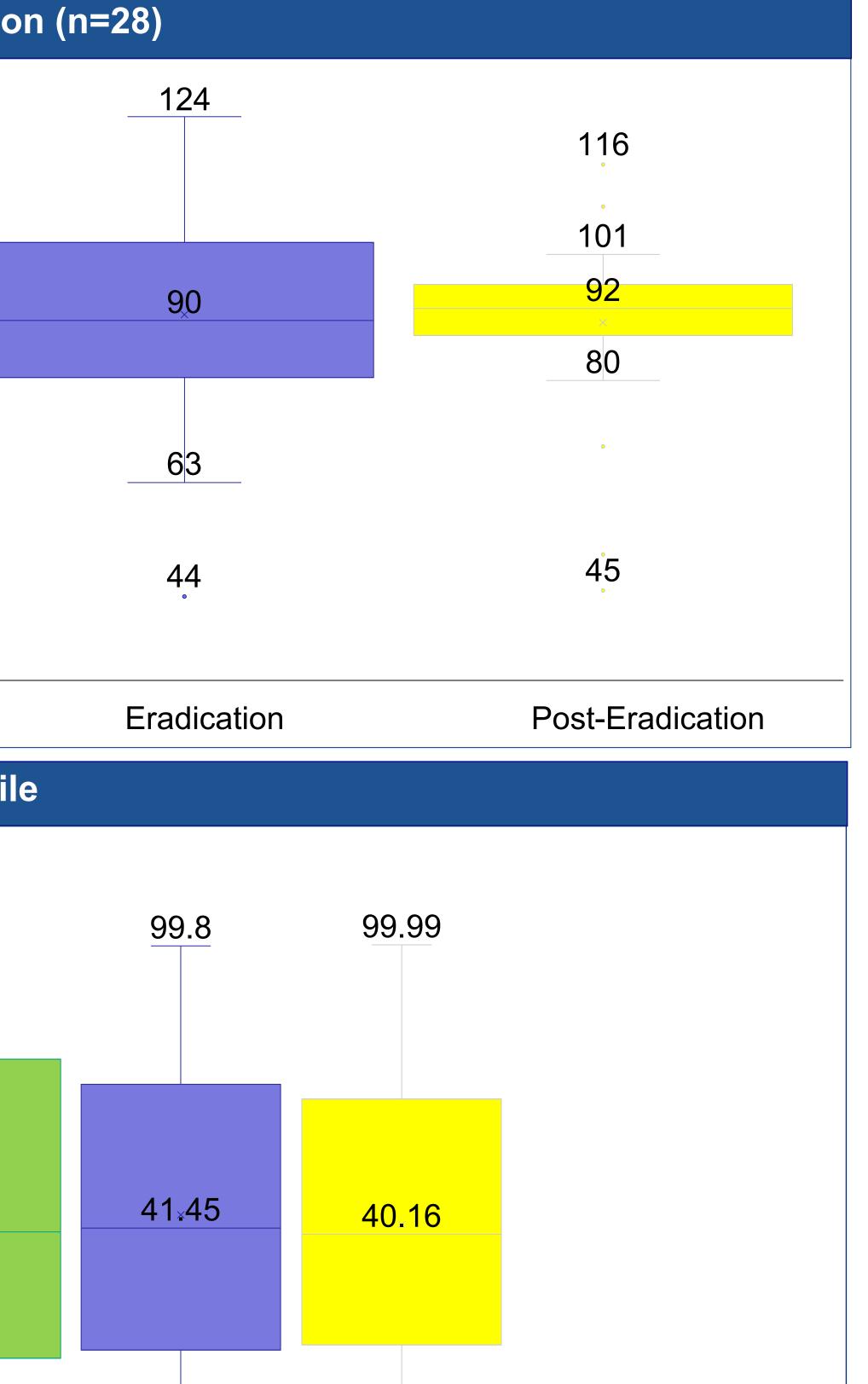
First Growth Eradication of *Pseudomonas aeruginosa* in Children with Cystic Fibrosis – A Retrospective Review

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Table 1: Demographics (N=55)Figure 2: Change in LuMale, n (%)26 (47)Weight percentile, median (range)35.9 (0.4 – 92.6)BMI percentile, median (range)40.6 (0.3 – 98.7)Age at first growth in years, median (range)9 (0.4 – 18)Pulmonary exacerbations events per year, median (range)2 (0 – 6)Pulmonary exacerbations events per year, median (range)2 (0 – 6)CF genes, n (%)508del homozygousF508del homozygous30 (55)F508del homozygous18 (33)O ciprofloxacin D ciprofloxacinCF related diabetes, n (%)Cough swab38 (69)Sputum17 (31)Figure 1: P aeruginosa adicationFailure 11%Failure 11%100	ng Function
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eradication	
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 In addition to the outp Table 2: Adverse Events (n=4) Of these 31% (15/4) 	-
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<i>Paeruginosa,</i> Oral Thrush (1) A low number of adve	C
and September Tobramycin Dry Cough (1) The regrowth rate at 3	35% compar
led antibiotic for Table 3: <i>P aeruginosa</i> regrowth	
d not complete Rate of regrowth in 12 months, n (%) 19 (35) The outpatient protoco	ol has compa
Time to regrowth within 12 months, 104 (13 - 304) median days (range)	ed use for th
the altheorem and be (range) Provincial Health Services Authority Province-wide solutions. Better health.	







Eradication **Post-Eradication** ition omparable to the 90% of the previous protocol ocol, 25% (17/55) received IV antibiotics the successful eradication group and 33% (2/6) group reported may be due to the limitation of a ares to the 30% of the previous protocol

0.4

parable efficacy to the previous protocol and those

this eradication protocol

0.22