

Online supplement for:

Clinical outcomes of bronchiectasis in India; Data from the EMBARC/Respiratory Research Network of India registry

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ONLINE SUPPLEMENTARY MATERIAL

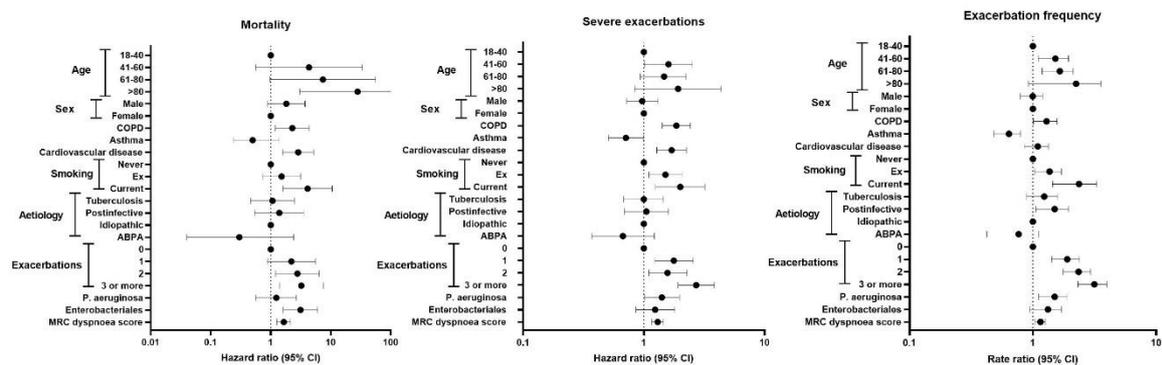


Figure S1. Multivariable models of outcomes (full data presented in table 4).

Characteristics	Mortality	Hospitalization	Exacerbations
Sex			
Male	1.26 (0.71-2.24)	1.18 (0.91-1.52)	1.22 (1.02-1.46)
Female	1.0 (reference)	1.0 (reference)	1.0 (reference)
Co-morbidities			
COPD	1.94 (1.09-3.46)	1.62 (1.24-2.10)	1.45 (1.19-1.76)
Asthma	0.54 (0.23-1.27)	0.70 (0.50-0.98)	0.54 (0.43-0.68)
Cardiovascular disease	2.04 (1.13-3.65)	1.43 (1.08-1.90)	0.92 (0.74-1.15)
Smoking			
Never	1.0 (reference)	1.0 (reference)	1.0 (reference)
Ex	1.0 (0.53-1.87)	1.34 (1.01-1.77)	1.47 (1.20-1.79)
Current	2.17 (0.94-5.02)	1.80 (1.16-2.78)	2.39 (1.68-3.40)
Aetiology			
Tuberculosis	0.74 (0.33-1.64)	1.02 (0.71-1.46)	1.72 (1.33-2.22)
Postinfective	0.85 (0.35-2.10)	0.99 (0.66-1.49)	1.74 (1.31-2.31)
Idiopathic	1.0 (reference)	1.0 (reference)	1.0 (reference)
ABPA	0.21 (0.03-1.63)	0.62 (0.35-1.12)	0.60 (0.40-0.91)

Table S2. Multivariable models adjusted for BSI only (only including variables not included in the BSI)

Patient characteristics	Age <40	40-60	≥60
N	192	382	444
Age (median-IQR)	31 (25-35)	51 (46-55)	67 (63-71)
Sex (% female)	109 (56.8%)	194 (50.8%)	163 (36.7%)
Co-morbidities			
Cardiovascular diseases	8 (4.2%)	57 (14.9%)	123 (27.7%)
Liver disease	0 (0%)	2 (0.5%)	11 (2.5%)
Osteoporosis	0 (0%)	30 (7.9%)	52 (11.7%)
Depression	3 (1.6%)	16 (4.2%)	19 (4.3%)
Anxiety	6 (3.1%)	26 (6.8%)	36 (8.1%)
Neoplastic disease	0 (0%)	5 (1.3%)	3 (0.7%)
Diabetes	4 (2.1%)	58 (15.2%)	83 (18.7%)
Asthma	63 (32.8%)	96 (25.1%)	75 (16.9%)
COPD	8 (4.2%)	80 (20.9%)	169 (38.1%)
Smoking			
Never	178 (92.7%)	288 (75.4%)	263 (59.2%)
Ex	13 (6.8%)	69 (18.1%)	159 (35.8%)
Current	1 (0.5%)	25 (6.5%)	22 (5.0%)
BSI (median-IQR)	4 (2-8)	6 (4-9)	8 (5-11)
Mild	103 (53.6%)	143 (37.4%)	84 (18.9%)
Moderate	56 (29.2%)	120 (31.4%)	152 (34.2%)
Severe	33 (17.2%)	119 (31.2%)	208 (46.8%)
FACED	1 (1-3)	2 (1-3)	3 (1-4)
Mild	126 (65.6%)	220 (57.6%)	203 (45.7%)
Moderate	62 (32.3%)	146 (38.2%)	180 (40.5%)
Severe	4 (2.1%)	16 (4.2%)	61 (13.7%)
FEV ₁ % predicted	52.0 (34.2-65.9)	48.4 (32.3-65.1)	50.4 (33.3-67.3)
BMI (median-IQR)	20.3 (17.2-23.4)	22.0 (19.4-25.3)	22.0 (19.3-24.4)
MRC dyspnoea score (median-IQR)	1 (0-2)	1 (1-3)	2 (1-3)
Sputum volume (daily)	10 (0-20)	18 (0-30)	10 (0-25)
Exacerbations per year (median, IQR)	1 (0-2)	1 (0-2)	1 (0-2)
0	88 (45.8%)	161 (42.1%)	145 (32.7%)
1	36 (18.8%)	77 (20.2%)	92 (20.7%)

2	32 (16.7%)	86 (22.5%)	114 (25.7%)
3 or more	36 (18.8%)	58 (15.2%)	93 (20.9%)
Hospitalized for severe exacerbations	51 (26.6%)	127 (33.2%)	195 (43.9%)
Bacteriology			
<i>P. aeruginosa</i>	20 (10.4%)	45 (11.8%)	49 (11.0%)
<i>H. influenzae</i>	1 (0.5%)	1 (0.3%)	0 (0%)
<i>M. catarrhalis</i>	5 (2.6%)	6 (1.6%)	6 (1.4%)
<i>S. aureus</i>	3 (1.6%)	5 (1.3%)	9 (2.0%)
Enterobacterales	18 (9.4%)	37 (9.7%)	37 (8.3%)
Reiff score (median, IQR)	6 (3-8)	6 (3-9)	4 (2-6)
Co-medications			
ICS	116 (60.4%)	243 (63.6%)	263 (59.2%)
Long term macrolide	12 (6.3%)	14 (3.7%)	13 (2.9%)
Inhaled antibiotic	5 (2.6%)	23 (6.0%)	14 (3.2%)
Regular airway clearance	64 (33.3%)	153 (40.1%)	177 (39.9%)
Aetiology			
Tuberculosis	46 (24.0%)	147 (38.5%)	181 (40.8%)
Postinfective	52 (27.1%)	85 (22.3%)	79 (17.8%)
Idiopathic	38 (19.8%)	56 (14.7%)	97 (21.8%)
ABPA	46 (24.0%)	44 (11.5%)	25 (5.6%)

Table S3. Comparison of patient characteristics according to age groups.

Patient characteristics	K. pneumoniae	No K.pneumoniae
N	50	968
Age (median-IQR)	52 (40-65)	57 (44-66)
Sex (% female)	16 (32.0%)	460 (46.5%)
Co-morbidities		
Cardiovascular diseases	11 (22.0%)	177 (18.3%)
Liver disease	1 (2.0%)	12 (1.2%)
Osteoporosis	8 (16.0%)	74 (7.6%)
Depression	5 (10.0%)	33 (3.4%)
Anxiety	8 (16.0%)	60 (6.2%)
Neoplastic disease	1 (2.0%)	7 (0.7%)
Diabetes	16 (32.0%)	129 (13.3%)
Asthma	12 (24.0%)	222 (22.9%)
COPD	20 (40.0%)	237 (24.5%)

Smoking		
Never	31 (62.0%)	698 (72.1%)
Ex	13 (26.0%)	228 (23.6%)
Current	6 (12.0%)	42 (4.3%)
BSI (median-IQR)	10 (6-13)	6 (4-10)
Mild	8 (16.0%)	322 (33.3%)
Moderate	14 (28.0%)	314 (32.4%)
Severe	28 (56.0%)	332 (34.3%)
FACED	3 (1-4)	2 (1-3)
Mild	21 (42.0%)	528 (54.5%)
Moderate	25 (50.0%)	363 (37.5%)
Severe	4 (8.0%)	77 (8.0%)
FEV ₁ % predicted	42.8 (28.5-57.2)	50.4 (33.2-66.5)
BMI (median-IQR)	21.1 (18.4-24.6)	21.8 (18.8-24.5)
MRC dyspnoea score (mean-SD)	2 (2-3)	1 (1-2)
Sputum volume (median-IQR)	23 (10-43)	10 (0-30)
Quality of life bronchiectasis RSS	44.4 (40.0-59.3)	66.7 (51.9-77.8)
Exacerbations per year (median, IQR)	2 (0-3)	1 (0-2)
0	13 (26.0%)	381 (39.4%)
1	8 (16.0%)	197 (20.4%)
2	13 (26.0%)	219 (22.6%)
3 or more	16 (32.0%)	171 (17.7%)
Hospitalized for severe exacerbations	33 (66%)	340 (35.1%)
Bacteriology		
<i>P. aeruginosa</i>	2 (4.0%)	112 (11.6%)
<i>H. influenzae</i>	0 (0%)	2 (0.2%)
<i>M. catarrhalis</i>	0 (0%)	17 (1.8%)
<i>S. aureus</i>	0 (0%)	17 (1.8%)
Enterobacterales	50 (100%)	42 (4.3%)
Reiff score (median, IQR)	6 (4-9)	5 (3-6)
Co-medications		
ICS	36 (72.0%)	586 (60.5%)
Long term macrolide	3 (6.0%)	36 (3.7%)
Inhaled antibiotic	6 (12.0%)	36 (3.7%)

Regular airway clearance	27 (54.0%)	367 (37.9%)
Aetiology		
Tuberculosis	21 (42.0%)	353 (36.5%)
Postinfective	9 (18.0%)	207 (21.4%)
Idiopathic	6 (12.0%)	185 (19.1%)
ABPA	5 (10.0%)	110 (11.4%)

Table S4. Comparison of K.pneumoniae infected patients vs uninfected patients.

Characteristics	Estimate	Lower 95%CI	Upper 95%CI	P-value
Female sex	-8.0	-72.4	56.4	0.81
Age (per year)	-2.7	-4.8	-0.6	0.010
FEV1 (per Litre)	-162.4	-212.5	-112.2	<0.001
Exacerbations 2 or more	-79.3	-153.6	-5.0	0.036
Exacerbations 1 per year	-30.8	-106.4	44.8	0.42
COPD	-83.3	-156.9	-9.7	0.027
Pseudomonas	-10.6	-98.7	77.6	0.81
Enterobacterales	59.2	-24.4	142.9	0.17
Inhaled antibiotics	-39.5	-162.9	84.0	0.53
Inhaled corticosteroids	55.5	-5.0	115.9	0.07
Asthma	-20.9	-109.4	67.6	0.64
Current smoker	-12.7	-135.5	110.1	0.84
Ex smoker	54.1	-22.6	130.7	0.17
Airway clearance	6.9	-51.6	65.3	0.82
Reiff score	-2.4	-10.3	5.5	0.56

MRC dyspnoea score	24.3	-10.5	59.0	0.17
Macrolide use	17.9	-94.3	130.1	0.76
Cardiovascular disease	-10.5	-77.7	56.6	0.76
ABPA	-60.2	-193.9	73.5	0.38
Tuberculosis	54.7	-39.3	148.7	0.25
Post-infective aetiology	-37.1	-135.6	61.4	0.46

Table S5. Linear mixed effects model estimates of FEV1 decline during the study period.

	COPD	Asthma	COPD+asthma	No airways disease
N	236	213	21	548
ICS	143 (60.6%)	165 (77.5%)	19 (90.5%)	295 (53.8%)
LABA	137 (58.1%)	151 (70.9%)	14 (66.7%)	282 (51.5%)
LAMA	61 (25.8%)	60 (28.2%)	8 (38.1%)	142 (25.9%)
LTRA	63 (26.7%)	67 (31.5%)	6 (28.6%)	85 (15.5%)
Macrolide	8 (3.4%)	3 (1.4%)	1 (4.8%)	27 (4.9%)

Table S6. Relationship between airways disease and treatment patterns (abbreviation ICS= inhaled corticosteroid, LABA= longacting beta agonist, LAMA= long acting muscarinic antagonist, LTRA= leukotriene receptor antagonist).