

Table (1) Various antibiotics susceptibility of *S. pneumoniae*.

Variable	MIC (ug/dl)	No (%)
Ampicillin	Resistant ≥ 2	71(91%)
	Intermediate 0.12 – 1	4 (5.1%)
	Susceptible ≤ 0.06	3 (3.8%)
Cefaclor	Resistant > 16	65(83.3%)
	Intermediate 8 – 16	6(7.7%)
	Susceptible ≤ 4	7(9%)
Erythromycin	Resistant ≥ 1	64(82.1%)
	Intermediate 0.5	8(10.3%)
	Susceptible ≤ 0.25	6 (7.7%)
Imipenem	Resistant ≥ 1	8(10.3%)
	Intermediate 0.5	4(5.1%)
	Susceptible ≤ 0.25	66 (84.6%)
Tetracycline	Resistant ≥ 8	56 (71.8%)
	Intermediate 4	3 (3.8%)
	Susceptible ≤ 2	19 (24.4%)
Clarithromycin	Resistant ≥ 2	5 (6.4%)
	Intermediate 1	3(3.8%)
	Susceptible ≤ 0.5	70 (89.8%)
Ceftriaxone	Resistant ≥ 2	8 (10.3%)
	Intermediate 1	4 (5.1%)
	Susceptible ≤ 0.5	66 (84.6%)
Trimethoprim/ sulfamethoxazole	Resistant ≥ 4	7 (9%)
	Intermediate 1 – 2	3 (3.8%)
	Susceptible ≤ 0.5	68 (87.2%)

Table (2) Fluroquinolones susceptibility of *S. pneumoniae*.

Variable	MIC (ug/dl)	no (%)
Ciprofloxacin (1 st generation Fluroquinolone)	Resistant \geq 4	35(44.9%)
	Intermediate 2	9(11.5%)
	Susceptible \leq 1	34 (43.6%)
Levofloxacin (2 nd generation Fluroquinolone)	Resistant \geq 8	33(42.3%)
	Intermediate 4	7(9%)
	Susceptible \leq 2	38(48.7%)
Gatfloxacin (3 rd generation Fluroquinolone)	Resistant \geq 4	36(46.1%)
	Intermediate 2	8(10.3%)
	Susceptible \leq 1	34 (43.6%)
Moxifloxacin (4 th generation Fluroquinolone)	Resistant \geq 4	36(46.2%)
	Intermediate 2	6(7.6%)
	Susceptible \leq 1	36(46.2%)

Table (3) Percent and types of the 41 Fluroquinolones-resistant *S. pneumoniae* isolates with resistance-associated QRDR substitutions.

Variable	no (%)	
GyrB	Ala583Ser	5 (12.2%)
	Arg545Asn	3 (7.3%)
ParC	Asp83Asn	2 (4.9%)
	Ser79Ala	1 (2.4%)
	Ser79Phe	14 (34.1%)
	Ser79Tyr	4 (9.8%)

Table (4) MICs and substitutions observed in GyrB and ParC in Ciprofloxacin - resistant and intermediate *S. pneumoniae* isolates.

Variable (MIC)	2	4	8	16
GyrB				
No substitution	3 (75%)	6 (66.7%)	7 (77.8%)	8 (80%)
Ala583Ser	0 (0%)	2 (22.2%)	1 (11.1%)	2 (20%)
Arg545Asn	1 (25%)	1 (11.1%)	1 (11.1%)	0 (0%)
Par C				
No substitution	3 (75%)	5 (55.6%)	3 (33.3%)	0 (0%)
Asp83Asn	0 (0%)	0 (0%)	1 (11.1%)	1 (10%)
Ser79Ala	0 (0%)	0 (0%)	0 (0%)	1 (10%)
Ser79Phe	1 (25%)	3 (33.3%)	3 (33.3%)	7 (70%)
Ser79Tyr	0 (0%)	1 (11.1%)	2 (22.2%)	1 (10%)

Table (5) MICs and substitutions observed in GyrB and ParC in Levofloxacin-resistant and intermediate *S. pneumoniae* isolates.

Variable (MIC)	4	8	16
GyrB			
No substitution	3 (75%)	8 (61.5%)	12 (85.7%)
Ala583Ser	1 (25%)	3 (23.1%)	1 (7.1%)
Arg545Asn	0 (0%)	2 (15.4%)	1 (7.1%)
Par C			
No substitution	3 (75%)	4 (30.7%)	2 (14.3%)
Asp83Asn	0 (0%)	1 (7.7%)	1 (7.1%)
Ser79Ala	0 (0%)	1 (7.7%)	0 (0%)
Ser79Phe	1 (25%)	5 (38.5%)	8 (57.1%)
Ser79Tyr	0 (0%)	2 (15.4%)	2 (14.4%)
Ser81Phe	0 (0%)	0 (0%)	1 (7.1%)

Table (6) MICs and substitutions observed in GyrB and ParC in Gatifloxacin-resistant and intermediate *S. pneumoniae* isolates

Variable (MIC)	2	4	8	16
GyrB				
No substitution	2 (50%)	4 (66.7%)	8 (66.7%)	9 (100%)
Ala583Ser	2 (50%)	0 (0%)	3 (25%)	0 (0%)
Arg545Asn	0 (0%)	2 (33.3%)	1 (8.3%)	0 (0%)
Par C				
No substitution	3 (75%)	3 (49.9%)	3 (25%)	1 (11.1%)
Asp83Asn	0 (0%)	0 (0%)	2 (16.7%)	0 (0%)
Ser79Ala	0 (0%)	1 (16.7%)	0 (0%)	0 (0%)
Ser79Phe	1 (25%)	1 (16.7%)	6 (50%)	5 (55.6%)
Ser79Tyr	0 (0%)	0 (0%)	1 (8.3%)	3 (33.3%)
Ser81Phe	0 (0%)	1 (16.7%)	0 (0%)	0 (0%)

Table (7) MICs and substitutions observed in GyrB and ParC in Moxifloxacin-resistant and intermediate *S. pneumoniae* isolates

Variable (MIC)	2	4	8	16
GyrB				
No substitution	2 (50%)	6 (66.7%)	8 (80%)	7 (87.5%)
Ala583Ser	1 (25%)	2 (22.2%)	2 (20%)	0 (0%)
Arg545Asn	1 (25%)	1 (11.1%)	0 (0%)	1 (12.5%)
Par C				
No substitution	4 (100%)	4 (44.4%)	1 (10%)	1 (12.5%)
Asp83Asn	0 (0%)	1 (11.2%)	1 (10%)	0 (0%)
Ser79Ala	0 (0%)	0 (0%)	1 (10%)	0 (0%)
Ser79Phe	0 (0%)	4 (44.4%)	5 (50%)	4 (50%)
Ser79Tyr	0 (0%)	0 (0%)	2 (20%)	2 (25%)