

XII. 부록

1. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴 치료지침 신규개발 프로토콜
2. 문헌 선택/제외 기준
3. 국내외 임상진료지침 검색식과 문헌 선택 과정
4. 핵심 임상 질문별 문헌 검색식과 문헌 선택 과정
5. 근거표
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1. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴 치료지침 신규개발 프로토콜

단 계	내 용	담 당	결 과 물	일정(기간)
1 단계	핵심질문 및 검색 키워드 선정	운영위원회 실무위원회	핵심질문, 검색 키워드	2017년 10월 1일~ 10월 3주
2 단계	진료지침 개발 & 체계적 문헌고찰 방법론 교육	최미영 양현종	실무위원회 교육	~10월 4주
3 단계	진료지침 문헌 검색	실무위원회 최미영	핵심질문 기반 진료지침, 문헌 검색	11월 2주
4 단계	수집된 진료지침 평가 및 내용 정리 체계적 문헌 고찰 범위 결정	실무위원회 최미영	수집된 진료지침 평가 결과 체계적 문헌 고찰 범위 결정	~11월 4주
5 단계	체계적 문헌 고찰 수행	실무위원회 최미영	팀별 체계적 문헌 고찰 진행	~12월 4주(4주)
6 단계	문헌 평가	실무위원회	문헌 평가 결과	~2018년 1월 4주(4주)
7 단계	체계적 문헌 고찰 결과 정리	실무위원회	메타 분석 결과 보고	~2월 4주(4주)
8 단계	핵심질문별 권고 및 근거 정리	실무위원회 개발위원회	권고 및 근거 정리 결과	~3월 4주
	권고문 초안 작성		권고문 초안	~4월 4주
9 단계	권고문 합의 및 권고등급 결정	검토위원회 실무위원회	델파이 결과, 권고등급	~5월 말(4주)
7 단계	권고문 최종안 도출	실무위원회 개발위원회	최종 권고문	~6월 2주

8 단계	권고문 최종안 검토	검토 위원회	동료 검토	~7월 2주
9 단계	권고안 합의도출 1차 라운드(설문 조사)	전문가 패널	권고문 합의	~9월 1주
10 단계	권고안 합의도출 1차 라운드(대면 조사)	전문가 패널	권고문 합의	~10월 1주
11 단계	외부 검토	검토위원회	치료지침 최종본	~10월말
	임상치료지침 승인	유관 학회		~11월말

2. 문헌 선택 제외 기준

1) 국내외 임상진료지침

- 선택 기준: 근거 기반 신규개발 지침, 2010년 이후 출간된 지침, 개정판이 있는 경우 최신판, 외부 검토가 이루어진 전문가 consensus 지침, 18세 이하 소아 대상
- 배제 기준: 권고 및 권고 기반 근거 표기가 불확실한 지침, 개정판이 있는 경우 구판, 이미 수용 개발로 만들어진 지침, 한국형 AGREE 2.0의 개발의 엄격성 60% 미만 지침

2) 국내외 무작위배정 비교임상시험 문헌

- 선택 기준: 무작위배정 비교임상시험, 18세 이하 소아, 언어(영어, 한국어, 중국어, 일본어), 2010년 이후 출간된 문헌
- 배제 기준: 영어, 한국어, 중국어, 일본어 이외의 언어, 관찰 연구, 비무작위배정 연구

3. 국내외 임상진료지침 검색식과 문헌 선택 과정

① 검색 자료원

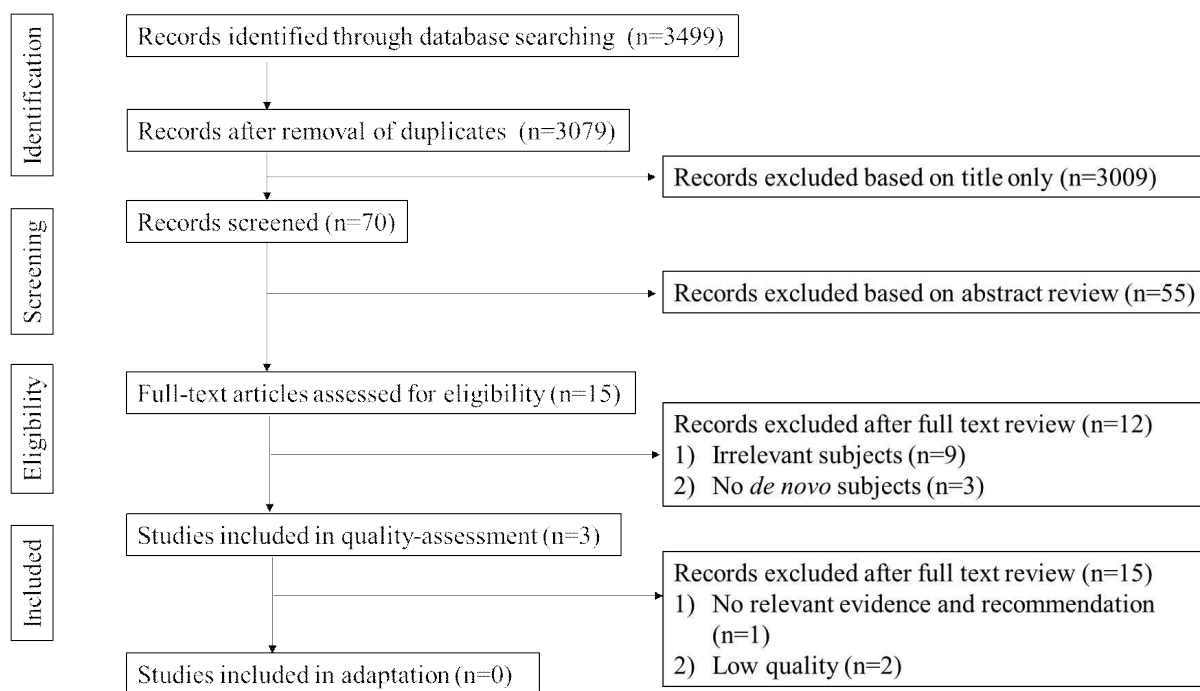
- Scottish Intercollegiate Guidelines Network (SIGN)
- National Guideline Clearinghouse (NGC)
- National Institute for Clinical Excellence (NICE)
- Google Scholar
- WHO
- G-I-N International Guideline Library
- Pubmed
- Cochrane library
- EMBASE
- Scopus
- 국내 5종 (NDL, KMBASE, KoreaMed, RISS, KISS)

② 검색식

핵심단어: Respiratory Tract Infections, pneumonia, guideline

검색식: ("Respiratory Tract Infections"[Mesh] OR "respiratory tract infection*" OR pneumonia OR "Pneumonia"[Mesh] OR "community acquired pneumonia") [mh] AND (practice guideline[PT] OR guideline[PT] OR guideline*[title] OR recommendation*[title] OR standard*[title] OR "guiding principle*" [title])

③ Preferred Reporting Items for Systematic Reviews and Meta-Analyses flowchart



④ 한국형 AGREE 2.0 개발의 엄격성 항목을 통한 국내외 임상진료지침의 질평가

- 2011 년도 미국, 2014년도 일본, 2016년도 홍콩 지침의 질평가 결과 미국 지침의 3자 합의 평가 결과 58%로 가장 높았으나 60%에 미달하였고, 나머지 2편의 지침은 모두 10% 미만이었다.

개발의 엄격성	지침 1, 일본	지침 2, 미국	지침 3, 홍콩
영역별 취득 총점	34	108	38
영역별 가능한 최저 점수	24	24	24
영역별 가능한 최고 점수	168	168	168
평가 점수(%)	6.9	58.0	9.7

지침 1. Guiding principles * for treating for treating *Mycoplasma pneumoniae* pneumonia. The Committee of Japanese Society of Mycoplasma. Available from <http://square.umin.ac.jp/jsm/Eng%20shisin.pdf>.¹⁾

지침 2. The management of community-acquired pneumonia in infants and children older than 3 months of age: clinical practice guidelines by the Pediatric Infectious Diseases Society and the Infectious Diseases Society of America. Clin Infect Dis. 2011;53:e25-76.²⁾

지침 3. Practice recommendations for management of community acquired pneumonia in children. Hong Kong J Paediatr. 2016;21:178-193.³⁾

4. 핵심 임상 질문별 문헌 검색식과 문헌 선택 과정

핵심질문 1. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 비마크로라이드 항균제(테트라사이클린제, 퀴놀론제) 치료는 마크로라이드 치료 대비 비교·효과적인가?

① 검색자료원

- Pubmed, Cochrane library, EMBASE
- Korean database: KoreaMed (<https://koreamed.org>), National Digital Science Library (NDSL, <http://www.ndsl.kr>), Korean medical database (KMBASE, <http://kmbase.medric.or.kr/>), Research Information Sharing Service (RISS, <http://www.riss.kr>), Korean studies Information Service System (KISS, <http://kiss.kstudy.com/>)
- Japan database: Japan Medical Abstracts Society, Igaku Chuo Zasshi (ICHUSHI, <http://www.jamas.or.jp>)
- Chinese database: China National Knowledge Infrastructure (CNKI, <http://www.cnki.net>)

② 검색식

Pubmed

Numbers	Search strategy	Items found
1	((Mycoplasma pneumoniae[MeSH Terms]) OR "mycoplasma pneumoniae"[Title/Abstract]) OR "M. pneumoniae"[Title/Abstract]	5979
2	(((((Pneumonia, Mycoplasma[MeSH Terms]) OR "mycoplasma pneumonia"[Title/Abstract]) OR "Primary Atypical	4110

	Pneumonia"[Title/Abstract]) OR "Mycoplasma pneumoniae pneumonia"[Title/Abstract]) OR "Mycoplasma Pneumonias"[Title/Abstract]	
3	#1 OR #2	7506
4	(Tetracycline[MeSH Terms]) OR Tetracycline*[Title/Abstract]	40679
5	(Minocycline[MeSH Terms]) OR Minocycline*[Title/Abstract]	7850
6	(Doxycycline[MeSH Terms]) OR Doxycycline*[Title/Abstract]	14694
7	(Metacycline[MeSH Terms]) OR Metacycline*[Title/Abstract]	350
8	(Oxytetracycline[MeSH Terms]) OR Oxytetracycline*[Title/Abstract]	7870
9	(tigecycline [Supplementary Concept]) OR Tigecycline*[Title/Abstract]	2589
10	(Quinolones[MeSH Terms]) OR Quinolone*[Title/Abstract]	46738
11	(Fluoroquinolones[MeSH Terms]) OR Fluoroquinolones*[Title/Abstract]	33578
12	(flumequine [Supplementary Concept]) OR Flumequine*[Title/Abstract]	413
13	(citrated nalidixic acid [Supplementary Concept]) OR Negram*[Title/Abstract]	50
14	(Nalidixic Acid[MeSH Terms]) OR nalidixic acid*[Title/Abstract]	6289
15	(Oxolinic Acid[MeSH Terms]) OR Oxolinic acid*[Title/Abstract]	713
16	((rosoxacin [Supplementary Concept]) OR Rosoxacin*[Title/Abstract]) OR Acrosoxacin*[Title/Abstract]) OR Eradacil*[Title/Abstract]	112
17	(Ciprofloxacin[MeSH Terms]) OR Cipro*[Title/Abstract]	25587
18	(Fleroxacin[MeSH Terms]) OR Fleroxacin*[Title/Abstract]	622
19	((lomefloxacin [Supplementary Concept]) OR lomefloxacin*[Title/Abstract]) OR Maxaquin*[Title/Abstract]	872

20	(nadifloxacin [Supplementary Concept]) OR nadifloxacin*[Title/Abstract]	89
21	((Norfloxacin[MeSH Terms]) OR norfloxacin*[Title/Abstract] OR Noroxin*[Title/Abstract])	4562
22	((Ofloxacin[MeSH Terms]) OR Ofloxacin*[Title/Abstract]) OR Tarivid*[Title/Abstract] OR Floxin*[Title/Abstract]	9818
23	((Pefloxacin[MeSH Terms]) OR pefloxacin*[Title/Abstract] OR Peflacin*[Title/Abstract])	1410
24	(balofloxacin [Supplementary Concept]) OR balofloxacin*[Title/Abstract]	41
25	(grepafloxacin [Supplementary Concept]) OR grepafloxacin*[Title/Abstract]	339
26	((Levofloxacin[MeSH Terms]) OR levofloxacin*[Title/Abstract]) OR :ab,ti[Title/Abstract]	6515
27	(pazufloxacin [Supplementary Concept]) OR Pazufloxacin*[Title/Abstract]	144
28	(sparfloxacin [Supplementary Concept]) OR sparfloxacin*[Title/Abstract]	1223
29	(temafloxacin [Supplementary Concept]) OR temafloxacin*[Title/Abstract]	273
30	(clinafloxacin [Supplementary Concept]) OR Clinafloxacin*[Title/Abstract]	276
31	((gatifloxacin [Supplementary Concept]) OR Gatifloxacin*[Title/Abstract]) OR Tequin*[Title/Abstract]	1632
32	((moxifloxacin [Supplementary Concept]) OR moxifloxacin*[Title/Abstract]) OR Avelox*[Title/Abstract] OR Vigamox*[Title/Abstract]	4140
33	(sitafloxacin [Supplementary Concept]) OR Sitafloxacin*[Title/Abstract]	276
34	(prulifloxacin [Supplementary Concept]) OR prulifloxacin*[Title/Abstract]	140

	prulifloxacin*[Title/Abstract]	
35	management[Title/Abstract]	917949
36	((Anti-Infective Agents[MeSH Terms]) OR "antiinfective agent"[Title/Abstract]) OR antimicrobial[Title/Abstract]	676010
37	((Anti-Bacterial Agents[MeSH Terms]) OR "anti-bacterial agents"[Title/Abstract]) OR antibiotics[Title/Abstract]	409380
38	"antibiotic agent"[Title/Abstract]	385
39	((Therapeutics[MeSH Terms]) OR treatment[Title/Abstract] OR therapy[Title/Abstract]) OR Therapeutics[Title/Abstract]	7102563
40	chemotherapy[Title/Abstract]	308705
41	#4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40	7969695
42	#3 AND #41	2605
43	(Mycoplasma genitalium[MeSH Terms]) OR genitalium[Title/Abstract]	1234
44	(Adult[MeSH Terms]) OR adult[Title/Abstract]	6771524
45	#43 OR #44	6772384
46	#42 NOT #45	1664
47	(((((Mycoplasma pneumoniae[MeSH Terms]) OR "mycoplasma pneumoniae"[Title/Abstract]) OR "M. pneumoniae"[Title/Abstract]) OR (((Pneumonia, Mycoplasma[MeSH Terms]) OR "mycoplasma pneumonia"[Title/Abstract]) OR "Primary Atypical Pneumonia"[Title/Abstract]) OR "Mycoplasma pneumoniae pneumonia"[Title/Abstract]) OR "Mycoplasma Pneumonias"[Title/Abstract])) AND (((Tetracycline[MeSH Terms]) OR Tetracycline*[Title/Abstract]) OR ((Minocycline[MeSH Terms]) OR	1664

Minocycline*[Title/Abstract])	OR	((Doxycycline[MeSH	
Terms])	OR	Doxycycline*[Title/Abstract])	OR
((Metacycline[MeSH Terms])	OR	Metacycline*[Title/Abstract]	
OR	((Oxytetracycline[MeSH	Terms])	OR
Oxytetracycline*[Title/Abstract])			OR
((tigecycline[Supplementary	Concept])		OR
Tigecycline*[Title/Abstract])	OR	((Quinolones[MeSH Terms]	
OR	Quinolone*[Title/Abstract])		OR
((Fluoroquinolones[MeSH	Terms])		OR
Fluoroquinolones*[Title/Abstract])			OR
((flumequine[Supplementary	Concept])		OR
Flumequine*[Title/Abstract])	OR	((citrated nalidixic	
acid[Supplementary Concept])	OR	Negram*[Title/Abstract]	
OR	((Nalidixic Acid[MeSH Terms])	OR	nalidixic
acid*[Title/Abstract])	OR	((Oxolinic Acid[MeSH Terms])	OR
Oxolinic	acid*[Title/Abstract])		OR
((((rosoxacin[Supplementary	Concept])		OR
Rosoxacin*[Title/Abstract])			OR
Acrosoxacin*[Title/Abstract])	OR	Eradacil*[Title/Abstract]	
OR	((Ciprofloxacin[MeSH Terms])	OR	Cipro*[Title/Abstract]
OR	((Fleroxacin[MeSH	Terms])	OR
Fleroxacin*[Title/Abstract])			OR
((lomefloxacin[Supplementary	Concept])		OR
lomefloxacin*[Title/Abstract])	OR	Maxaquin*[Title/Abstract]	
OR	((nadifloxacin[Supplementary	Concept])	OR
nadifloxacin*[Title/Abstract])	OR	((Norfloxacin[MeSH	
Terms])	OR	norfloxacin*[Title/Abstract])	OR
Noroxin*[Title/Abstract])	OR	((Ofloxacin[MeSH Terms])	OR
Ofloxacin*[Title/Abstract])	OR	Tarivid*[Title/Abstract])	OR
Floxin*[Title/Abstract])	OR	((Pefloxacin[MeSH Terms])	OR
pefloxacin*[Title/Abstract])	OR	Peflacin*[Title/Abstract]	
OR	((balofloxacin[Supplementary	Concept])	OR
balofloxacin*[Title/Abstract])			OR

<p> ((grepafloxacin[Supplementary Concept]) OR grepafloxacin*[Title/Abstract]) OR (((Levofloxacin[MeSH Terms]) OR levofloxacin*[Title/Abstract]) OR ab, ti[Title/Abstract]) OR ((pazufloxacin[Supplementary Concept]) OR Pazufloxacin*[Title/Abstract]) OR ((sparfloxacin[Supplementary Concept]) OR sparfloxacin*[Title/Abstract]) OR ((temafloxacin[Supplementary Concept]) OR temafloxacin*[Title/Abstract]) OR ((clinafloxacin[Supplementary Concept]) OR Clinafloxacin*[Title/Abstract]) OR (((gatifloxacin[Supplementary Concept]) OR Gatifloxacin*[Title/Abstract]) OR Tequin*[Title/Abstract] OR (((moxifloxacin[Supplementary Concept]) OR moxifloxacin*[Title/Abstract]) OR Avelox*[Title/Abstract] OR Vigamox*[Title/Abstract]) OR ((sitafloxacin[Supplementary Concept]) OR Sitafloxacin*[Title/Abstract]) OR ((prulifloxacin[Supplementary Concept]) OR prulifloxacin*[Title/Abstract]) OR (management[Title/Abstract]) OR (((Anti-Infective Agents[MeSH Terms]) OR "antiinfective agent"[Title/Abstract]) OR antimicrobial[Title/Abstract]) OR (((Anti-Bacterial Agents[MeSH Terms]) OR "anti-bacterial agents"[Title/Abstract]) OR antibiotics[Title/Abstract]) OR ("antibiotic agent"[Title/Abstract]) OR (((Therapeutics[MeSH Terms]) OR treatment[Title/Abstract]) OR therapy[Title/Abstract]) OR Therapeutics[Title/Abstract] OR (chemotherapy[Title/Abstract]))) NOT (((Mycoplasma genitalium[MeSH Terms]) OR genitalium[Title/Abstract]) OR ((Adult[MeSH Terms]) OR adult[Title/Abstract])) </p>	
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EMbase

Numbers	Search strategy	Items found
1	'mycoplasma pneumoniae'/exp	6686
2	'mycoplasma pneumoniae':ab,ti	6449
3	#1 OR #2	8646
4	'm. pneumoniae':ab,ti	2605
5	'mycoplasma pneumonia'/exp	3816
6	'mycoplasma pneumonia':ab,ti	821
7	'primary atypical pneumonia':ab,ti	309
8	'mycoplasma pneumoniae pneumonia':ab,ti	449
9	#6 OR #7 OR #8	1534
10	#5 OR #9	4381
11	'mycoplasma pneumonias':ab,ti	20
12	#3 OR #4 OR #10 OR #11	10753
13	'tetracycline'/exp	77473
14	tetracycline*:ab,ti	37429
15	#13 OR #14	88938
16	'minocycline'/exp	21230
17	minocycline*:ab,ti	7822
18	#16 OR #17	21986
19	'doxycycline'/exp	45104
20	doxycycline*:ab,ti	15971
21	#19 OR #20	47080
22	'metacycline'/exp	844
23	metacycline*:ab,ti	70
24	#22 OR #23	853
25	'oxytetracycline'/exp	12743

26	oxytetracycline*:ab,ti	4570
27	#25 OR #26	13506
28	'tigecycline'/exp	7901
29	tigecycline*:ab,ti	3627
30	#28 OR #29	8086
31	'quinolone'/exp	4340
32	quinolone*:ab,ti	16708
33	#31 OR #32	18657
34	'quinolone derivative'/exp	143815
35	fluoroquinolones*:ab,ti	11879
36	#34 OR #35	146229
37	'flumequine'/exp	969
38	flumequine*:ab,ti	476
39	#37 OR #38	1052
40	'nalidixic acid'/exp	16342
41	negram*:ab,ti	41
42	'nalidixic acid*':ab,ti	5858
43	#41 OR #42	5879
44	#40 OR #43	17739
45	'oxolinic acid'/exp	1510
46	'oxolinic acid*':ab,ti	718
47	#45 OR #46	1654
48	'rosoxacin'/exp	354
49	rosoxacin*:ab,ti	101
50	acrosoxacin*:ab,ti	21
51	eradacil*:ab,ti	3
52	#49 OR #50 OR #51	119
53	#48 OR #52	362

54	'ciprofloxacin'/exp	84613
55	cipro*:ab,ti	31320
56	#54 OR #55	88541
57	'fleroxacin'/exp	1736
58	fleroxacin*:ab,ti	784
59	#57 OR #58	1783
60	'lomefloxacin'/exp	2716
61	lomefloxacin*:ab,ti	1087
62	maxaquin*:ab,ti	22
63	#61 OR #62	1098
64	#60 OR #63	2825
65	'nadifloxacin'/exp	280
66	nadifloxacin*:ab,ti	123
67	#65 OR #66	283
68	'norfloxacin'/exp	14684
69	norfloxacin*:ab,ti	5353
70	noroxin*:ab,ti	14
71	#69 OR #70	5357
72	#68 OR #71	15343
73	'ofloxacin'/exp	24058
74	ofloxacin*:ab,ti	8418
75	tarivid*:ab,ti	75
76	floxin*:ab,ti	41
77	#74 OR #75 OR #76	8483
78	#73 OR #77	24969
79	'pefloxacin'/exp	4529
80	pefloxacin*:ab,ti	1627
81	peflacine*:ab,ti	19

82	#80 OR #81	1636
83	#79 OR #82	4722
84	'balofloxacin'/exp	262
85	balofloxacin*:ab,ti	185
86	#84 OR #85	263
87	'grepafloxacin'/exp	1397
88	grepafloxacin*:ab,ti	441
89	#87 OR #88	1418
90	'levofloxacin'/exp	29227
91	levofloxacin*:ab,ti	9937
92	levaquin*:ab,ti	81
93	#91 OR #92	9996
94	#90 OR #93	30207
95	'pazufloxacin'/exp	570
96	pazufloxacin*:ab,ti	335
97	#95 OR #96	580
98	'sparfloxacin'/exp	3964
99	sparfloxacin*:ab,ti	1680
100	#98 OR #99	4064
101	'temafloxacin'/exp	1014
102	temafloxacin*:ab,ti	434
103	#101 OR #102	1028
104	'clinafloxacin'/exp	815
105	clinafloxacin*:ab,ti	274
106	#104 OR #105	829
107	'gatifloxacin'/exp	6202
108	gatifloxacin*:ab,ti	2010

109	tequin*:ab,ti	17
110	#108 OR #109	2013
111	#107 OR #110	6347
112	'moxifloxacin'/exp	15135
113	moxifloxacin*:ab,ti	5471
114	avelox*:ab,ti	56
115	vigamox*:ab,ti	70
116	#113 OR #114 OR #115	5499
117	#112 OR #116	15432
118	'sitafloxacin'/exp	780
119	sitafloxacin*:ab,ti	351
120	#118 OR #119	792
121	'prulifloxacin'/exp	457
122	prulifloxacin*:ab,ti	215
123	#121 OR #122	470
124	'management'/exp	933600
125	management:ab,ti	1235534
126	#124 OR #125	2049929
127	'antiinfective agent'/exp	2806484
128	'antiinfective agent':ab,ti	31
129	antimicrobial:ab,ti	157519
130	'anti-bacterial agents':ab,ti	173
131	#128 OR #129 OR #130	157690
132	#127 OR #131	2841233
133	'antibiotic agent'/exp	1203967
134	antibiotics:ab,ti	215459
135	'antibiotic agent':ab,ti	529
136	#134 OR #135	215868

137	#133 OR #136	1262593
138	treatment:ab,ti	4982335
139	'therapy'/exp	7383560
140	therapy:ab,ti	2199714
141	therapeutics:ab,ti	82785
142	#140 OR #141	2268193
143	#139 OR #142	8140065
144	'chemotherapy'/exp	535417
145	chemotherapy:ab,ti	470539
146	#144 OR #145	723791
147	#15 OR #18 OR #21 OR #24 OR #27 OR #30 OR #33 OR #36 OR #39 OR #44 OR #47 OR #53 OR #56 OR #59 OR #64 OR #67 OR #72 OR #78 OR #83 OR #86 OR #89 OR #94 OR #97 OR #100 OR #103 OR #106 OR #111 OR #117 OR #120 OR #123 OR #126 OR #132 OR #137 OR #138 OR #143 OR #146	12725890
148	#12 AND #147	5799
149	'mycoplasma genitalium'/exp	1573
150	genitalium:ab,ti	1483
151	#149 OR #150	1923
152	'adult'/exp	6776951
153	adult:ab,ti	820498
154	#152 OR #153	7173430
155	#151 OR #154	7174882
156	#148 NOT #155	4113
157	((('mycoplasma pneumoniae'/exp OR 'mycoplasma pneumoniae':ab,ti) OR 'm. pneumoniae':ab,ti OR (('mycoplasma pneumonia'/exp OR ('mycoplasma pneumonia':ab,ti OR 'primary atypical pneumonia':ab,ti OR 'mycoplasma pneumoniae pneumonia':ab,ti)) OR	4113

'mycoplasma pneumonias':ab,ti) AND (('tetracycline'/exp OR
tetracycline*:ab,ti) OR ('minocycline'/exp OR
minocycline*:ab,ti) OR ('doxycycline'/exp OR
doxycycline*:ab,ti) OR ('metacycline'/exp OR
metacycline*:ab,ti) OR ('oxytetracycline'/exp OR
oxytetracycline*:ab,ti) OR ('tigecycline'/exp OR
tigecycline*:ab,ti) OR ('quinolone'/exp OR quinolone*:ab,ti)
OR ('quinolone derivative'/exp OR fluoroquinolones*:ab,ti)
OR ('flumequine'/exp OR flumequine*:ab,ti) OR ('nalidixic
acid'/exp OR (negram*:ab,ti OR 'nalidixic acid*':ab,ti)) OR
('oxolinic acid'/exp OR 'oxolinic acid*':ab,ti) OR
('rosoxacin'/exp OR (rosoxacin*:ab,ti OR acrosoxacin*:ab,ti
OR eradacil*:ab,ti)) OR ('ciprofloxacin'/exp OR cipro*:ab,ti)
OR ('fleroxacin'/exp OR fleroxacin*:ab,ti) OR
('lomefloxacin'/exp OR (lomefloxacin*:ab,ti OR
maxaquin*:ab,ti)) OR ('nadifloxacin'/exp OR
nadifloxacin*:ab,ti) OR ('norfloxacin'/exp OR
(norfloxacin*:ab,ti OR noroxin*:ab,ti)) OR ('ofloxacin'/exp
OR (ofloxacin*:ab,ti OR tarivid*:ab,ti OR floxin*:ab,ti)) OR
('pefloxacin'/exp OR (pefloxacin*:ab,ti OR peflacine*:ab,ti))
OR ('balofloxacin'/exp OR balofloxacin*:ab,ti) OR
('grepafloxacin'/exp OR grepafloxacin*:ab,ti) OR
('levofloxacin'/exp OR (levofloxacin*:ab,ti OR
levaquin*:ab,ti)) OR ('pazufloxacin'/exp OR
pazufloxacin*:ab,ti) OR ('sparfloxacin'/exp OR
sparfloxacin*:ab,ti) OR ('temafloxacin'/exp OR
temafloxacin*:ab,ti) OR ('clinafloxacin'/exp OR
clinafloxacin*:ab,ti) OR ('gatifloxacin'/exp OR
(gatifloxacin*:ab,ti OR tequin*:ab,ti)) OR ('moxifloxacin'/exp
OR (moxifloxacin*:ab,ti OR avelox*:ab,ti OR vigamox*:ab,ti))
OR ('sitafloxacin'/exp OR sitafloxacin*:ab,ti) OR
('prulifloxacin'/exp OR prulifloxacin*:ab,ti) OR
('management'/exp OR management:ab,ti) OR ('antiinfective

	agent'/exp OR ('antiinfective agent':ab,ti OR antimicrobial:ab,ti OR 'anti-bacterial agents':ab,ti)) OR ('antibiotic agent'/exp OR (antibiotics:ab,ti OR 'antibiotic agent':ab,ti)) OR treatment:ab,ti OR ('therapy'/exp OR (therapy:ab,ti OR therapeutics:ab,ti)) OR ('chemotherapy'/exp OR chemotherapy:ab,ti))) NOT (('mycoplasma genitalium'/exp OR genitalium:ab,ti) OR ('adult'/exp OR adult:ab,ti))	
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Cochrane library

Numbers	Search strategy	Items found
1	MeSH descriptor: [Mycoplasma pneumonia] explode all trees	24
2	"Mycoplasma pneumoniae":ab,ti	116
3	"M. pneumoniae":ab,ti	44
4	#2 OR #3	120
5	#1 OR #4	123
6	MeSH descriptor: [Pneumonia, Mycoplasma] explode all trees	40
7	"Mycoplasma pneumonia":ab,ti	21
8	"Primary atypical pneumonia":ab,ti	2
9	"Mycoplasma pneumoniae pneumonia":ab,ti	14
10	"Mycoplasma pneumonia":ab,ti	0
11	#7 OR #8 OR #9 OR #10	35
12	#6 OR #11	65
13	#5 OR #12	148
14	MeSH descriptor: [Tetracycline] explode all trees	738
15	tetracycline*:ab,ti	1447
16	#14 OR #15	1608
17	MeSH descriptor: [Minocycline] explode all trees	337

18	minocycline*:ab,ti	575
19	#17 OR #18	548
20	MeSH descriptor: [Doxycycline] explode all trees	806
21	doxycycline*:ab,ti	1255
22	#19 OR #20	1356
23	MeSH descriptor: [Metacycline] explode all trees	19
24	metacycline*:ab,ti	3
25	#23 OR #24	19
26	MeSH descriptor: [Oxytetracycline] explode all trees	114
27	oxytetracycline*:ab,ti	133
28	#26 OR #27	175
29	tigecycline*:ab,ti	92
30	MeSH descriptor: [Quinolones] explode all trees	3567
31	quinolone*:ab,ti	494
32	#30 OR #32	3818
33	MeSH descriptor: [Fluoroquinolones] explode all trees	2642
34	fluoroquinolones*:ab,ti	356
35	#33 OR #34	2839
36	flumequine*:ab,ti	2
37	negram*:ab,ti	1
38	MeSH descriptor: [Nalidixic acid] explode all trees	65
39	'nalidixic acid'/exp	106
40	#38 OR #39	121
41	MeSH descriptor: [Oxolinic acid] explode all trees	6
42	'oxolinic acid*':ab,ti	7
43	#41 OR #42	8
44	rosoxacin*:ab,ti	12
45	acrosoxacin*:ab,ti	1

46	eradacil*:ab,ti	2
47	MeSH descriptor: [Ciprofloxacin] explode all trees	962
48	cipro*:ab,ti	1862
49	#54 OR #55	1949
50	MeSH descriptor: [Fleroxacin] explode all trees	60
51	fleroxacin*:ab,ti	105
52	#50 OR #51	105
53	lomefloxacin*:ab,ti	142
54	maxaquin*:ab,ti	4
55	nadifloxacin*:ab,ti	19
56	MeSH descriptor: [Norfloxacin] explode all trees	234
57	norfloxacin*:ab,ti	420
58	noroxin*:ab,ti	5
59	#57 OR #58	420
60	#56 OR #59	428
61	MeSH descriptor: [Ofloxacin] explode all trees	794
62	ofloxacin*:ab,ti	866
63	tarivid*:ab,ti	8
64	floxin*:ab,ti	3
65	#62 OR #63 OR #64	869
66	#61 OR #65	1246
67	MeSH descriptor: [Pefloxacin] explode all trees	74
68	pefloxacin*:ab,ti	158
69	peflacine*:ab,ti	1
70	#68 OR #69	159
71	#67 OR #70	160
72	balofloxacin*:ab,ti	9
73	grepafloxacin*:ab,ti	32

74	MeSH descriptor: [Levofloxacin] explode all trees	374
75	levofloxacin*:ab,ti	908
76	levaquin*:ab,ti	4
77	#75 OR #76	909
78	#74 OR #77	912
79	pazufloxacin*:ab,ti	21
80	sparfloxacin*:ab,ti	125
81	temafloxacin*:ab,ti	33
82	clinafloxacin*:ab,ti	17
83	gatifloxacin*:ab,ti	218
84	tequin*:ab,ti	1
85	moxifloxacin*:ab,ti	799
86	avelox*:ab,ti	7
87	vigamox*:ab,ti	40
88	sitafloracin*:ab,ti	25
89	prulifloxacin*:ab,ti	39
90	management:ab,ti	61129
91	MeSH descriptor: [Anti-Infective agent'] explode all trees	27859
92	'antiinfective agent':ab,ti	3
93	antimicrobial:ab,ti	4294
94	#92 OR #93	4297
95	#91 OR #94	30579
96	MeSH descriptor: [Anti-Bacterial agents] explode all trees	10999
97	'anti-bacterial agents':ab,ti	2
98	antibiotics:ab,ti	9329
99	#97 OR #98	9329
100	#96 OR #99	17513
101	'antibiotic agent':ab,ti	36

102	MeSH descriptor: [Therapeutics] explode all trees	290609
103	treatment:ab,ti	420434
104	therapy:ab,ti	192613
105	therapeutics:ab,ti	1569
106	#103 OR #104 OR #105	495029
107	#102 OR #106	629794
108	chemotherapy:ab,ti	36752
109	#16 OR #19 OR #22 OR #25 OR #28 OR #29 OR #32 OR #35 OR #36 OR #37 OR #40 OR #43 OR #44 OR #45 OR #46 OR #49 OR #52 OR #53 OR #54 OR #55 OR #60 OR #66 OR #71 OR #72 OR #733 OR #786 OR #79 OR #80 OR #81 OR #82 OR #83 OR #84 OR #85 OR #86 OR #87 OR #88 OR #89 OR #90 OR #95 OR #100 OR #101 OR #107 OR #108	667171
110	#13 AND #109	122
111	MeSH descriptor: [Mycoplasma genitalium] explode all trees	11
112	genitalium:ab,ti	27
113	#111 OR #112	27
114	MeSH descriptor: [Adult] explode all trees	1820
115	adult:ab,ti	35087
116	#114 OR #115	36868
117	#113 OR #116	36894
118	#110 NOT #117	114

Korea database

Databases	Search strategy	Items found
NDSL	("mycoplasma pneumoniae" "M. pneumoniae" "mycoplasma pneumonia" "Primary Atypical Pneumonia"	41

	<p>"Mycoplasma pneumoniae pneumonia" "Mycoplasma Pneumonias") !(genitalium adult) AND (Tetracycline* Minocycline* Doxycycline* Metacycline* Oxytetracycline* Tigecycline* Quinolone* Fluoroquinolones* Flumequine* Negram* "nalidixic acid*" "Oxolinic acid*" Rosoxacin* Acrosoxacin* Eradacil* Cipro* Fleroxacin* lomefloxacin* Maxaquin* nadifloxacin* norfloxacin* Noroxin* Ofloxacin* Tarivid* Floxin* pefloxacin* Peflacin* balofloxacin* grepafloxacin* levofloxacin* Levaquin* Pazufloxacin* sparfloxacin* temafloxacin* Clinafloxacin* Gatifloxacin* Tequin* moxifloxacin* Avelox* Vigamox* Sitafloracin* prulifloxacin* management "anti-infective agent" antimicrobial "anti-bacterial agents" antibiotics "antibiotic agent" treatment therapy Therapeutics chemotherapy) !(genitalium adult)</p>	
KMBASE	<p>((((((([ALL=mycoplasma pneumoniae] OR [ALL=M. pneumoniae]) OR [ALL=mycoplasma pneumonia]) OR [ALL=Primary Atypical Pneumonia]) OR [ALL=Mycoplasma pneumoniae pneumonia]) OR [ALL=Mycoplasma Pneumonias]) AND (((([ALL=Tetracycline*] OR [ALL=Minocycline*]) OR [ALL=Doxycycline*]) OR [ALL=Metacycline*]) OR [ALL=Oxytetracycline*]) OR [ALL=Tigecycline*]) OR [ALL=Quinolone*]) OR [ALL=Fluoroquinolones*])) AND NOT ([ALL=genitalium] OR [ALL=adult]))) OR (((((((([ALL=mycoplasma pneumoniae] OR [ALL=M. pneumoniae]) OR [ALL=mycoplasma pneumonia] OR [ALL=Primary Atypical Pneumonia]) OR [ALL=Mycoplasma pneumoniae pneumonia]) OR [ALL=Mycoplasma Pneumonias]) AND (((([ALL=Flumequine*] OR [ALL=Negram*]) OR [ALL=nalidixic acid*]) OR [ALL=Oxolinic acid*]) OR</p>	79

[ALL=Rosoxacin*]) OR [ALL=Acrosoxacin*]) OR
 [ALL=Eradacil*]) OR [ALL=Cipro*])) AND NOT
 ([ALL=genitalium] OR [ALL=adult])))) OR
 (((((((([ALL=mycoplasma pneumoniae] OR [ALL=M.
 pneumoniae]) OR [ALL=mycoplasma pneumonia]) OR
 [ALL=Primary Atypical Pneumonia]) OR [ALL=Mycoplasma
 pneumoniae pneumonia]) OR [ALL=Mycoplasma
 Pneumonias]) AND (((((((([ALL=Fleroxacin*] OR
 [ALL=lomefloxacin*]) OR [ALL=Maxaquin*]) OR
 [ALL=nadifloxacin*]) OR [ALL=norfloxacin*]) OR
 [ALL=Noroxin*]) OR [ALL=Ofloxacin*]) OR [ALL=Tarivid*]
 AND NOT ([ALL=genitalium] OR [ALL=adult])))) OR
 (((((((([ALL=mycoplasma pneumoniae] OR [ALL=M.
 pneumoniae]) OR [ALL=mycoplasma pneumonia]) OR
 [ALL=Primary Atypical Pneumonia]) OR [ALL=Mycoplasma
 pneumoniae pneumonia]) OR [ALL=Mycoplasma
 Pneumonias]) AND (((((((([ALL=Floxin*] OR [ALL=pefloxacin*]
 OR [ALL=Peflacin*]) OR [ALL=balofloxacin*]) OR
 [ALL=grepafloxacin*]) OR [ALL=levofloxacin*]) OR
 [ALL=Levaquin*]) OR [ALL=Pazufloxacin*])) AND NOT
 ([ALL=genitalium] OR [ALL=adult])))) OR
 (((((((([ALL=mycoplasma pneumoniae] OR [ALL=M.
 pneumoniae]) OR [ALL=mycoplasma pneumonia]) OR
 [ALL=Primary Atypical Pneumonia]) OR [ALL=Mycoplasma
 pneumoniae pneumonia]) OR [ALL=Mycoplasma
 Pneumonias]) AND (((((((([ALL=sparfloxacin*] OR
 [ALL=temafloxacin*]) OR [ALL=Clinafloxacin*]) OR
 [ALL=Gatifloxacin*]) OR [ALL=Tequin*]) OR
 [ALL=moxifloxacin*]) OR [ALL=Avelox*]) OR
 [ALL=Vigamox*])) AND NOT ([ALL=genitalium] OR
 [ALL=adult])))) OR (((((((([ALL=mycoplasma pneumoniae] OR
 [ALL=M. pneumoniae]) OR [ALL=mycoplasma pneumonia]
 OR [ALL=Primary Atypical Pneumonia]) OR

	[ALL=Mycoplasma pneumoniae pneumonia] OR [ALL=Mycoplasma Pneumonias] AND (((([ALL=Sitafloxacin*] OR [ALL=prulifloxacin*]) OR [ALL=management]) OR [ALL="antiinfective agent"]) OR [ALL=antimicrobial]) OR [ALL="anti-bacterial agents"])) AND NOT ([ALL=genitalium] OR [ALL=adult])) OR (((((((([ALL=mycoplasma pneumoniae] OR [ALL=M. pneumoniae]) OR [ALL=mycoplasma pneumonia]) OR [ALL=Primary Atypical Pneumonia]) OR [ALL=Mycoplasma pneumoniae pneumonia]) OR [ALL=Mycoplasma Pneumonias]) AND (((([ALL=antibiotics] OR [ALL="antibiotic agent"]) OR [ALL=treatment]) OR [ALL=therapy]) OR [ALL=Therapeutics]) OR [ALL=chemotherapy])) AND NOT ([ALL=genitalium] OR [ALL=adult]))))	
KoreaMed	("mycoplasma pneumoniae" [ALL] OR "M. pneumoniae" [ALL] OR "mycoplasma pneumonia" [ALL] OR "Primary Atypical Pneumonia" [ALL] OR "Mycoplasma pneumoniae pneumonia" [ALL] OR "Mycoplasma Pneumonias" [ALL]) AND (Tetracycline* [ALL] OR Minocycline* [ALL] OR Doxycycline* [ALL] OR Metacycline* [ALL] OR Oxytetracycline* [ALL] OR Tigecycline* [ALL] OR Quinolone* [ALL] OR Fluoroquinolones* [ALL] OR Flumequine* [ALL] OR Negram* [ALL] OR "nalidixic acid*" [ALL] OR "Oxolinic acid*" [ALL] OR Rosoxacin* [ALL] OR Acrosoxacin* [ALL] OR Eradacil* [ALL] OR Cipro* [ALL] OR Fleroxacin* [ALL] OR lomefloxacin* [ALL] OR Maxaquin* [ALL] OR nadifloxacin* [ALL] OR norfloxacin* [ALL] OR Noroxin* [ALL] OR Ofloxacin* [ALL] OR Tarivid* [ALL] OR Floxin* [ALL] OR pefloxacin* [ALL] OR Peflacine* [ALL] OR balofloxacin* [ALL] OR grepafloxacin* [ALL] OR levofloxacin* [ALL] OR Levaquin* [ALL] OR Pazufloxacin* [ALL] OR sparfloxacin* [ALL] OR temafloxacin* [ALL] OR	1

	Clinafloxacin* [ALL] OR Gatifloxacin* [ALL] OR Tequin* [ALL] OR moxifloxacin* [ALL] OR Avelox* [ALL] OR Vigamox* [ALL] OR Sitafloxacin* [ALL] OR prulifloxacin* [ALL] OR management [ALL] OR "antiinfective agent" [ALL] OR antimicrobial [ALL] OR "anti-bacterial agents" [ALL] OR antibiotics [ALL] OR "antibiotic agent" [ALL] OR treatment [ALL] OR therapy [ALL] OR Therapeutics [ALL] OR chemotherapy [ALL]) NOT (genitalium [ALL] OR adult [ALL])	
RISS	((((Tetracycline OR Minocycline OR Doxycycline) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "mycoplasma pneumonia" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias"))) OR ((Metacycline OR Oxytetracycline OR Tigecycline) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "mycoplasma pneumonia" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias"))) OR ((Quinolone OR Fluoroquinolones OR Flumequine) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "mycoplasma pneumonia" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias"))) OR ((Negram OR "nalidixic acid" OR "Oxolinic acid") AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias"))) OR ((Rosoxacin OR Acrosoxacin OR Eradacil) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias"))) OR ((Cipro OR Fleroxacin OR lomefloxacin) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR	93

"Mycoplasma Pneumonias")) OR ((Maxaquin OR nadifloxacin OR norfloxacin) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias")) OR ((Noroxin OR Ofloxacin OR Tarivid) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias")) OR ((Floxin OR pefloxacin OR Peflacin) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias")) OR ((balofloxacin OR grepafloxacin OR levofloxacin) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias")) OR ((Levaquin OR Pazufloxacin OR sparfloxacin) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias")) OR ((temafloxacin OR Clinafloxacin OR Gatifloxacin) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias")) OR ((Tequin OR moxifloxacin OR Avelox) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias")) OR ((Vigamox OR Sitafloxacin OR prulifloxacin) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias")) OR ((management OR antimicrobial OR antibiotics) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical

	Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias")) OR ((treatment OR therapy OR chemotherapy) AND ("mycoplasma pneumoniae" OR "M. pneumoniae" OR "Primary Atypical Pneumonia" OR "Mycoplasma pneumoniae pneumonia" OR "Mycoplasma Pneumonias"))))	
KISS	(((ALL=Tetracycline*) OR (ALL=Minocycline*) OR (ALL=Doxycycline*) OR (ALL=Metacycline*) OR (ALL=Oxytetracycline*) OR (ALL=Tigecycline*) OR (ALL=Quinolone*) OR (ALL=Fluoroquinolones*) OR (ALL=Flumequine*) OR (ALL=Negram*) OR (ALL="nalidixic acid*") OR (ALL="Oxolinic acid*") OR (ALL=Rosoxacin*) OR (ALL=Acrosoxacin*) OR (ALL=Eradacil*) OR (ALL=Cipro*) OR (ALL=Fleroxacin*) OR (ALL=lomefloxacin*) OR (ALL=Maxaquin*) OR (ALL=nadifloxacin*) OR (ALL=norfloxacin*) OR (ALL=Noroxin*) OR (ALL=Ofloxacin* OR (ALL=Tarivid*) OR (ALL=Floxin*) OR (ALL=pefloxacin*) OR (ALL=Peflacine*) OR (ALL=balofloxacin*) OR (ALL=grepafloxacin*) OR (ALL=levofloxacin*) OR (ALL=Levaquin*) OR (ALL=Pazufloxacin*) OR (ALL=sparfloxacin*) OR (ALL=temafloxacin*) OR (ALL=Clinafloxacin*) OR (ALL=Gatifloxacin*) OR (ALL=Tequin*) OR (ALL=moxifloxacin*) OR (ALL=Avelox*) OR (ALL=Vigamox*) OR (ALL=Sitafloxacin*) OR (ALL=prulifloxacin*)) OR ((ALL=management) OR (ALL=antimicrobial) OR (ALL=antibiotics)) OR ((ALL=treatment) OR (ALL=therapy) OR (ALL=chemotherapy))) AND ((ALL="mycoplasma pneumoniae") OR (ALL="M. pneumoniae") OR (ALL="mycoplasma pneumonia") OR (ALL="Primary Atypical Pneumonia") OR (ALL="Mycoplasma pneumoniae pneumonia") OR (ALL="Mycoplasma Pneumonias")))) NOT	62

	((ALL=genitalium) OR (ALL=adult)))	
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Numbers	Search strategy	Items found
1	マイコプラズマ/AL	286
2	肺炎/AL	2716
3	#1 AND #2	159
4	"mycoplasma pneumoniae"/AL	75
5	"M. pneumoniae"/AL	0
6	"mycoplasma pneumonia"/AL	78
7	"Primary Atypical Pneumonia"/AL	0
8	"Mycoplasma pneumoniae pneumonia"/AL	1
9	"Mycoplasma Pneumonias"/AL	0
10	#3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9	193
11	テトラサイクリン/AL	32
12	ミノサイクリン/AL	62
13	ドキシサイクリン/AL	16
14	メタサイクリン/AL	0
15	オキシテトラサイクリン/AL	2
16	チゲサイクリン/AL	8
17	キノロン類/AL	2
18	フルオロキノロン類/AL	2
19	フルメキン/AL	0
20	ネグラム/AL	0
21	ナリジクス酸/AL	5
22	オキシリン酸/AL	0

23	ロゾキサシン/AL	0
24	アクロソキサシン/AL	0
25	シプロフロキサシン/AL	32
26	フレロキサシン/AL	0
27	ロメフロキサシン/AL	1
28	マクサキン/AL	0
29	ナジフロキサシン/AL	3
30	ノルフロキサシン/AL	3
31	ノロキシ/AL	0
32	タリビッド/AL	1
33	ペフロキサシン/AL	0
34	ペフラシン/AL	0
35	バロフロキサシン/AL	0
36	グレパフロキサシン/AL	0
37	レボフロキサシン/AL	84
38	レヴァキン/AL	0
39	パズフロキサシン/AL	5
40	スバルフロキサシン/AL	0
41	テマフロキサシン/AL	0
42	クリナフロキサシン/AL	0
43	ガチフロキサシン/AL	4
44	テキン/AL	61
45	モキシフロキサシン/AL	14
46	ビガモックス/AL	0
47	シタフロキサシン/AL	20
48	プルリフロキサシン/AL	0
49	management/AL	800
50	"antiinfective agent"/AL	0

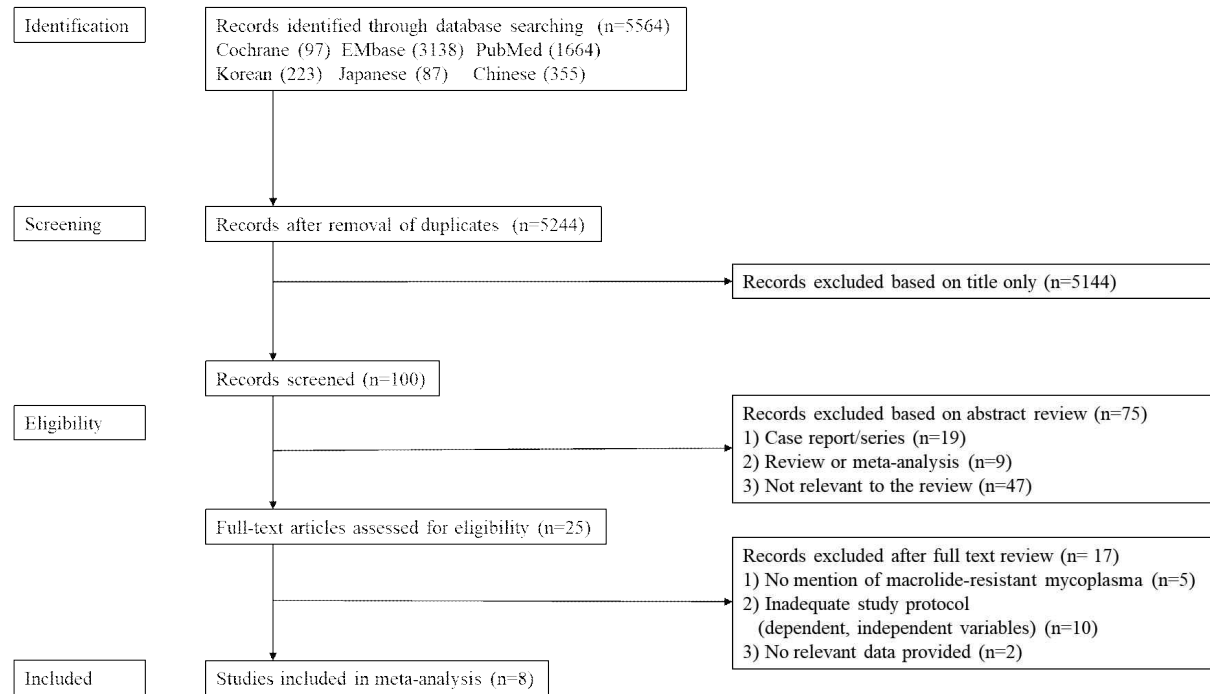
51	antimicrobial/AL	117
52	"anti-bacterial agents"/AL	0
53	antibiotics/AL	159
54	"antibiotic agent"/AL	1
55	treatment/AL	1793
56	therapy/AL	4233
57	Therapeutics/AL	263
58	chemotherapy/AL	578
59	治療/AL	80767
60	化学療法/AL	6152
61	#11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52 OR #53 OR #54 OR #55 OR #56 OR #57 OR #58 OR #59 OR #60	85249
62	#10 AND #61	88
63	genitalium/AL	10
64	生殖器/AL	539
65	adult/AL	566
66	#63 OR #64 OR #65	1114
67	#62 NOT #66	87

China National Knowledge Infrastructure (CNKI) <http://www.cnki.net>

Numbers	Search strategy	Items found
1	((((KY = 'mycoplasma pneumoniae' OR KY = 'M. pneumoniae'	355

OR KY = 'mycoplasma pneumonia' OR KY = 'Primary Atypical Pneumonia' OR KY = 'Mycoplasma pneumoniae pneumonia' OR KY = 'Mycoplasma Pneumonias') AND (KY = 'Peflacin*' OR KY = 'balofloxacin*' OR KY = 'grepafloxacin*' OR KY = 'levofloxacin*' OR KY = 'Levaquin*' OR KY = 'Pazufloxacin*' OR KY = 'Sparfloxacin*' OR KY = 'temafloxacin*' OR KY = 'clinafloxacin*' OR KY = 'gatifloxacin*' OR KY = 'tequin*' OR KY = 'moxifloxacin*' OR KY = 'avelox*' OR KY = 'vigamox*' OR KY = 'sitafloxacin*' OR KY = 'prulifloxacin*' OR KY = 'management' OR KY = 'antiinfective agent' OR KY = 'antimicrobial' OR KY = 'anti-bacterial agents' OR KY = 'antibiotics' OR KY = 'antibiotic agent' OR KY = 'treatment' OR KY = 'therapy' OR KY = 'therapeutics' OR KY = 'chemotherapy')) NOT (KY = 'genitalium' OR KY = 'adult')
OR (((KY = 'mycoplasma pneumoniae' OR KY = 'M. pneumoniae' OR KY = 'mycoplasma pneumonia' OR KY = 'Primary Atypical Pneumonia' OR KY = 'Mycoplasma pneumoniae pneumonia' OR KY = 'Mycoplasma Pneumonias') AND (KY = 'Tetracycline*' OR KY = 'minocycline*' OR KY = 'doxycycline*' OR KY = 'metacycline*' OR KY = 'oxytetracycline*' OR KY = 'tigecycline*' OR KY = 'quinolone*' OR KY = 'fluoroquinolone*' OR KY = 'flumequine*' OR KY = 'negram*' OR KY = 'nalidixic acid*' OR KY = 'oxolinic acid*' OR KY = 'rosoxacin*' OR KY = 'acrosoxacin*' OR KY = 'eradacil*' OR KY = 'cipro*' OR KY = 'fleroxacin*' OR KY = 'lomefloxacin*' OR KY = 'maxaquin*' OR KY = 'nadifloxacin*' OR KY = 'norfloxacin*' OR KY = 'noroxin*' OR KY = 'ofloxacin*' OR KY = 'tarivid*' OR KY = 'floxin*' OR KY = 'pefloxacin*')) NOT (KY = 'genitalium' OR KY = 'adult'))

③ Preferred Reporting Items for Systematic Reviews and Meta-Analyses flowchart



핵심질문 2. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 코르티코스테로이드 제 병용 치료는 마크로라이드 치료 대비 비교·효과적인가?

핵심질문 3. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 경구용 코르티코스테

로이드제 치료는 정주용 코르티코스테로이드제 치료 대비 비교·효과적인가?

① 검색자료원

- Pubmed, Cochrane library, EMBASE

- Korean database: KoreaMed (<https://koreamed.org>), National Digital Science Library (NDSL, <http://www.ndsl.kr>), Korean medical database (KMBASE, <http://kmbase.medric.or.kr/>), Research Information Sharing Service (RISS, <http://www.riss.kr>), Korean studies Information Service System (KISS, <http://kiss.kstudy.com/>)

- Japan database: Japan Medical Abstracts Society, Igaku Chuo Zasshi (ICHUSHI, <http://www.jamas.or.jp>)

- Chinese database: China National Knowledge Infrastructure (CNKI, <http://www.cnki.net>)

② 검색식

PubMed

Numbers	Search strategy	results
1	Mycoplasma pneumoniae[MeSH Terms]	2758
2	"Mycoplasma pneumoniae"[Title/Abstract]	5294
3	"M. pneumoniae"[Title/Abstract]	2187
4	#2 OR #3	5567
5	#1 OR #4	5911
6	Pneumonia, Mycoplasma[MeSH Terms]	3603
7	"Mycoplasma pneumonia"[Title/Abstract]	576
8	"Primary Atypical Pneumonia"[Title/Abstract]	315
9	"Mycoplasma pneumoniae pneumonia"[Title/Abstract]	366
10	"Mycoplasma pneumonias"[Title/Abstract]	15

11	#7 OR #8 OR #9 OR #10	1231
12	#6 OR #11	4069
13	#5 OR #12	7430
14	Anti-Inflammatory Agents[MeSH Terms]	139370
15	Antiinflammatories[Title/Abstract]	97
16	“Anti-Inflammatories”[Title/Abstract]	768
17	“Antiinflammatory Agents”[Title/Abstract]	1130
18	“Anti-Inflammatory Agents”[Title/Abstract]	6523
19	#15 OR #16 OR #17 OR #18	8454
20	#14 OR #19	143360
21	Steroids[MeSH Terms]	794971
22	Steroid*[Title/Abstract]	212103
23	#21 or #22	905218
24	Glucocorticoids[MeSH Terms]	56432
25	Glucocorticoid*[Title/Abstract]	59965
26	#24 OR #25	96605
27	Prednisolone[MeSH Terms]	47756
28	Prednisolone*[Title/Abstract]	24830
29	#27 OR #28	58223
30	Prednisone[MeSH Terms]	37085
31	Prednisone*[Title/Abstract]	26016
32	#30 OR #31	49160
33	Methylprednisolone[MeSH Terms]	17962
34	Methylprednisolone *[Title/Abstract]	14137
35	Methyl-prednisolone *[Title/Abstract]	894
36	#34 OR #35	14927
37	#33 OR #36	24162
38	Methylprednisolone Hemisuccinate[MeSH Terms]	687

39	Solumedrol[Title/Abstract]	114
40	"Solu-medrol"[Title/Abstract]	119
41	#39 OR #40	233
42	#38 OR #41	860
43	Adrenal cortex hormones[MeSH Terms]	264003
44	Adrenal cortex hormones*[Title/Abstract]	10505
45	#43 OR #44	264121
46	Hydrocortisone[MeSH Terms]	68365
47	Hydrocortisone*[Title/Abstract]	17537
48	#46 OR #47	73016
49	#20 OR #23 OR #26 OR #29 OR # 32 OR #37 OR #42 OR #45 OR #48	1097699
50	#13 AND #49	296
51	((((Mycoplasma pneumoniae[MeSH Terms]) OR ("Mycoplasma pneumoniae"[Title/Abstract]) OR Mycoplasma pneumoniae[MeSH Terms])) OR ((Pneumonia, Mycoplasma[MeSH Terms]) OR (((("Mycoplasma pneumonia"[Title/Abstract]) OR "Primary Atypical Pneumonia"[Title/Abstract]) OR "Mycoplasma pneumoniae pneumonia"[Title/Abstract]) OR "Mycoplasma pneumonias"[Title/Abstract]))) AND (((((((Anti-Inflammatory Agents[MeSH Terms]) OR (((Antiinflammatories[Title/Abstract]) OR "Anti-Inflammatories"[Title/Abstract]) OR "Antiinflammatory Agents"[Title/Abstract]) OR "Anti-Inflammatory Agents"[Title/Abstract]))) OR ((Steroids[MeSH Terms]) OR Steroid*[Title/Abstract])) OR ((Glucocorticoids[MeSH Terms]) OR Glucocorticoid*[Title/Abstract])) OR ((Prednisolone[MeSH Terms]) OR Prednisolone*[Title/Abstract])) OR ((Prednisone[MeSH Terms]) OR Prednisone*[Title/Abstract])	296

OR	((Methylprednisolone[MeSH Terms]))	OR
((Methylprednisolone	*[Title/Abstract]))	OR
Methyl-prednisolone	*[Title/Abstract]))))	OR
((Methylprednisolone Hemisuccinate[MeSH Terms]))	OR	
((Solumedrol[Title/Abstract]))	OR	
“Solu-medrol”[Title/Abstract]))))	OR	((Adrenal cortex hormones[MeSH Terms]))
OR	Adrenal cortex hormones*[Title/Abstract]))	OR
((Hydrocortisone[MeSH Terms]))	OR	Hydrocortisone*[Title/Abstract]))

EMBASE

Numbers	Search strategy	results
1	‘Mycoplasma pneumoniae’/exp	6,614
2	‘Mycoplasma pneumoniae’:ab,ti	6,393
3	#1 OR #2	8,555
4	‘M. pneumoniae’:ab,ti	2,575
5	‘Mycoplasma pneumonia’/exp	3,755
6	‘Mycoplasma pneumonia’:ab,ti	805
7	‘Primary atypical pneumonia’:ab,ti	310
8	‘Mycoplasma pneumoniae pneumonia’:ab,ti	438
9	#6 OR #7 OR #8	1,510
10	#5 OR #9	4,317
11	‘Mycoplasma pneumonias’:ab,ti	20
12	#3 OR #4 OR #10 OR #11	10,633
13	antiinflammatories:ab,ti	199
14	'anti-inflammatories':ab,ti	1,128
15	antiinflammatory agent'/exp	1,683,729
16	'antiinflammatory agents':ab,ti	1,921
17	'anti-inflammatory agents':ab,ti	7,624
18	#16 OR #17	9,484

19	#15 OR #18	1,685,471
20	'steroid'/exp	1,389,799
21	steroid*:ab,ti	283,695
22	#20 OR #21	1,468,138
23	'glucocorticoid'/exp	658,094
24	glucocorticoid*:ab,ti	75,285
25	#23 OR #24	676,327
26	'prednisolone'/exp	113,687
27	prednisolone*:ab,ti	32,939
28	#26 OR #27	119,790
29	'prednisone'/exp	155,510
30	prednisone*:ab,ti	39,232
31	#29 OR #30	160,522
32	'methylprednisolone'/exp	81,253
33	methylprednisolone*:ab,ti	20,573
34	'methyl-prednisolone*':ab,ti	1,510
35	#33 OR #34	21,882
36	#32 OR #35	84,786
37	'methylprednisolone sodium succinate'/exp	6,315
38	solumedrol:ab,ti	488
39	'solu-medrol':ab,ti	199
40	#38 OR #39	683
41	#37 OR #40	6,410
42	'corticosteroid'/exp	863,033
43	'adrenal cortex hormone*':ab,ti	611
44	#42 OR #43	863,087
45	'hydrocortisone'/exp	120,575
46	hydrocortisone*:ab,ti	19,790

47	#45 OR #46	124,603
48	#13 OR #14 OR #19 OR #22 OR #25 OR #28 OR #31 OR #36 OR #41 OR #44 OR #47	2,434,793
49	#12 AND #48	1,564

Cochrane library

Numbers	Search strategy	results
1	MeSH descriptor: [Mycoplasma pneumonia] explode all trees	24
2	"Mycoplasma pneumoniae":ab,ti	113
3	"M. pneumoniae":ab,ti	43
4	#2 OR #3	117
5	#1 OR #4	120
6	MeSH descriptor: [Pneumonia, Mycoplasma] explode all trees	40
7	"Mycoplasma pneumonia":ab,ti	21
8	"Primary atypical pneumonia":ab,ti	2
9	"Mycoplasma pneumoniae pneumonia":ab,ti	14
10	"Mycoplasma pneumonia":ab,ti	0
11	#7 OR #8 OR #9 OR #10	35
12	#6 OR #11	65
13	#5 OR #12	145
14	MeSH descriptor: [Anti-Inflammatory Agents] explode all trees	12500
15	antiinflammatories:ab,ti	6
16	"anti-inflammatories":ab,ti	63
17	"antiinflammatory agents":ab,ti	64
18	"anti-inflammatory agents":ab,ti	332

19	#15 OR #16 OR #17 OR #18	461
20	#14 OR #19	12809
21	MeSH descriptor: [Steroids] explode all trees	44003
22	steroid*:ab,ti	15216
23	#21 or #22	54508
24	MeSH descriptor: [Glucocorticoids] explode all trees	4091
25	Glucocorticoid*:ab,ti	2817
26	#24 OR #25	6096
27	MeSH descriptor: [Prednisolone] explode all trees	3602
28	prednisolone*:ab,ti	3328
29	#27 OR #28	5513
30	MeSH descriptor: [Prednisone] explode all trees	2944
31	prednisone*:ab,ti	4837
32	#30 OR #31	5838
33	MeSH descriptor: [Methylprednisone] explode all trees	1702
34	methylprednisolone*:ab,ti	2293
35	"methyl-prednisolone*":ab,ti	133
36	#34 OR #35	2397
37	#33 OR #36	2924
38	MeSH descriptor: [Methylprednisone Hemisuccinate] explode all trees	56
39	solumedrol:ab,ti	19
40	"solu-medrol":ab,ti	27
41	#39 OR #40	45
42	#38 OR #41	92
43	MeSH descriptor: [Adrenal Cortex Hormones] explode all trees	13079
44	"adrenal cortex hormone*":ab,ti	5
45	#43 OR #44	13083

46	MeSH descriptor: [Hydrocortisone] explode all trees	5170
47	hydrocortisone*:ab,ti	1639
48	#46 OR #47	6024
49	#20 OR #23 OR #26 OR #29 OR #32 OR #37 OR #42 OR #45 OR #48	69866
50	#13 OR #49	11

Korea database

Databases	Search strategy	results
NDSL	(("mycoplasma pneumoniae" AND "Antiinflammatory Agents") OR ("mycoplasma pneumoniae" AND "Anti-Inflammatory Agents") OR ("mycoplasma pneumoniae" AND Steroid*) OR ("mycoplasma pneumoniae" AND Glucocorticoid*) OR ("mycoplasma pneumoniae" AND Prednisolone*) OR ("mycoplasma pneumoniae" AND Prednisone*) OR "mycoplasma pneumoniae" AND Methylprednisolone*) OR ("mycoplasma pneumoniae" AND Solumedrol) OR ("mycoplasma pneumoniae" AND Adrenal cortex hormone*) OR ("mycoplasma pneumoniae" AND Hydrocortisone*) OR ("mycoplasma pneumonia" AND "Antiinflammatory Agents") OR ("mycoplasma pneumonia" AND "Anti-Inflammatory Agents") OR ("mycoplasma pneumonia" AND Steroid*) OR ("mycoplasma pneumonia" AND Glucocorticoid*) OR ("mycoplasma pneumonia" AND Prednisolone*) OR ("mycoplasma pneumonia" AND Prednisone*) OR ("mycoplasma pneumonia" AND Methylprednisolone*) OR ("mycoplasma pneumonia" AND Solumedrol) OR ("mycoplasma pneumonia" AND Adrenal cortex hormone*) OR ("mycoplasma pneumonia" AND Hydrocortisone*) OR ("Mycoplasma pneumoniae pneumonia" AND	11

	<p>"Antiinflammatory Agents") OR ("Mycoplasma pneumoniae pneumonia" AND "Anti-Inflammatory Agents") OR ("Mycoplasma pneumoniae pneumonia" AND Steroid*) OR ("Mycoplasma pneumoniae pneumonia" AND Glucocorticoid*) OR ("Mycoplasma pneumoniae pneumonia" AND Prednisolone*) OR ("Mycoplasma pneumoniae pneumonia" AND Prednisone*) OR ("Mycoplasma pneumoniae pneumonia" AND Methylprednisolone*) OR ("Mycoplasma pneumoniae pneumonia" AND Solumedrol) OR ("Mycoplasma pneumoniae pneumonia" AND Adrenal cortex hormone*) OR ("Mycoplasma pneumoniae pneumonia" AND Hydrocortisone*) OR ("Pneumonia, Mycoplasma" AND "Antiinflammatory Agents") OR ("Pneumonia, Mycoplasma" AND "Anti-Inflammatory Agents") OR ("Pneumonia, Mycoplasma" AND Steroid*) OR ("Pneumonia, Mycoplasma" AND Glucocorticoid*) OR ("Pneumonia, Mycoplasma" AND Prednisolone*) OR ("Pneumonia, Mycoplasma" AND Prednisone*) OR ("Pneumonia, Mycoplasma" AND Methylprednisolone*) OR ("Pneumonia, Mycoplasma" AND Solumedrol) OR ("Pneumonia, Mycoplasma" AND Adrenal cortex hormone*) OR ("Pneumonia, Mycoplasma" AND Hydrocortisone*))</p>	
KMBASE	<p>(((((ALL=mycoplasma pneumoniae] OR [ALL=M. pneumoniae]) OR [ALL=mycoplasma pneumonia])) OR [ALL=Primary Atypical Pneumonia]) OR [ALL=Mycoplasma pneumoniae pneumonia]) OR [ALL=Mycoplasma Pneumonias]) AND (((((((([ALL=Anti-Inflammatory Agent*] OR [ALL=Steroid*]) OR [ALL=Glucocorticoid*]) OR [ALL=Prednisolone*]) OR [ALL=Prednisone*]) OR [ALL=Methylprednisolone*]) OR [ALL=Methylprednisolone Hemisuccinate*]) OR [ALL=Adrenal cortex hormone*]) OR [ALL=Hydrocortisone*]))</p>	19

KoreaMed	("mycoplasma pneumoniae" [ALL] OR "M. pneumoniae" [ALL] OR "mycoplasma pneumonia" [ALL] OR "Primary Atypical Pneumonia" [ALL] OR "Mycoplasma pneumoniae pneumonia" [ALL] OR "Mycoplasma Pneumonias" [ALL] AND ("Anti-Inflammatory Agent*" [ALL] OR Steroid* [ALL] OR Glucocorticoid* [ALL] OR Prednisolone* [ALL] OR Prednisone* [ALL] OR Methylprednisolone* [ALL] OR Methylprednisolone Hemisuccinate* [ALL] OR Adrenal cortex hormone* [ALL] OR Hydrocortisone* [ALL])	1
RISS	((("mycoplasma pneumoniae" AND Antiinflammatories) OR ("mycoplasma pneumoniae" AND Steroid*) OR ("mycoplasma pneumoniae" AND Glucocorticoid*) OR ("mycoplasma pneumoniae" AND Prednisolone*) OR ("mycoplasma pneumoniae" AND Prednisone*) OR ("mycoplasma pneumoniae" AND Methylprednisolone*) OR ("mycoplasma pneumoniae" AND Methyl-prednisolone*) OR "mycoplasma pneumoniae" AND Solumedrol) OR ("mycoplasma pneumoniae" AND Adrenal cortex hormone*) OR ("mycoplasma pneumoniae" AND Hydrocortisone*) OR ("mycoplasma pneumonia" AND Antiinflammatories) OR ("mycoplasma pneumonia" AND Steroid*) OR ("mycoplasma pneumonia" AND Glucocorticoid*) OR ("mycoplasma pneumonia" AND Prednisolone*) OR ("mycoplasma pneumonia" AND Prednisone*) OR ("mycoplasma pneumonia" AND Methylprednisolone*) OR ("mycoplasma pneumonia" AND Methyl-prednisolone*) OR ("mycoplasma pneumonia" AND Solumedrol) OR ("mycoplasma pneumonia" AND Adrenal cortex hormone*) OR ("mycoplasma pneumonia" AND Hydrocortisone*) OR ("M. pneumoniae" AND Antiinflammatories) OR ("M. pneumoniae" AND Steroid*) OR ("M. pneumoniae" AND Glucocorticoid*) OR ("M. pneumoniae" AND Prednisolone*) OR ("M. pneumoniae" AND	20

	Prednisone*) OR ("M. pneumoniae" AND Methylprednisolone*) OR ("M. pneumoniae" AND Methyl-prednisolone*) OR ("M. pneumoniae" AND Solumedrol) OR ("M. pneumoniae" AND Adrenal cortex hormone*) OR ("M. pneumoniae" AND Hydrocortisone*))	
KISS	(("mycoplasma pneumoniae" AND Antiinflammatories) OR ("mycoplasma pneumoniae" AND Steroid*) OR ("mycoplasma pneumoniae" AND Glucocorticoid*) OR ("mycoplasma pneumoniae" AND Prednisolone*) OR ("mycoplasma pneumoniae" AND Prednisone*) OR ("mycoplasma pneumoniae" AND Methylprednisolone*) OR ("mycoplasma pneumoniae" AND Methyl-prednisolone*) OR "mycoplasma pneumoniae" AND Solumedrol) OR ("mycoplasma pneumoniae" AND Adrenal cortex hormone*) OR ("mycoplasma pneumoniae" AND Hydrocortisone*) OR ("mycoplasma pneumoniae" AND Antiinflammatories) OR ("mycoplasma pneumoniae" AND Steroid*) OR ("mycoplasma pneumoniae" AND Glucocorticoid*) OR ("mycoplasma pneumoniae" AND Prednisolone*) OR ("mycoplasma pneumoniae" AND Prednisone*) OR ("mycoplasma pneumoniae" AND Methylprednisolone*) OR ("mycoplasma pneumoniae" AND Methyl-prednisolone*) OR ("mycoplasma pneumoniae" AND Solumedrol) OR ("mycoplasma pneumoniae" AND Adrenal cortex hormone*) OR ("mycoplasma pneumoniae" AND Hydrocortisone*) OR ("M. pneumoniae" AND Antiinflammatories) OR ("M. pneumoniae" AND Steroid*) OR ("M. pneumoniae" AND Glucocorticoid*) OR ("M. pneumoniae" AND Prednisolone*) OR ("M. pneumoniae" AND Prednisone*) OR ("M. pneumoniae" AND Methylprednisolone*) OR ("M. pneumoniae" AND Methyl-prednisolone*) OR ("M. pneumoniae" AND Solumedrol) OR ("M. pneumoniae" AND Adrenal cortex	14

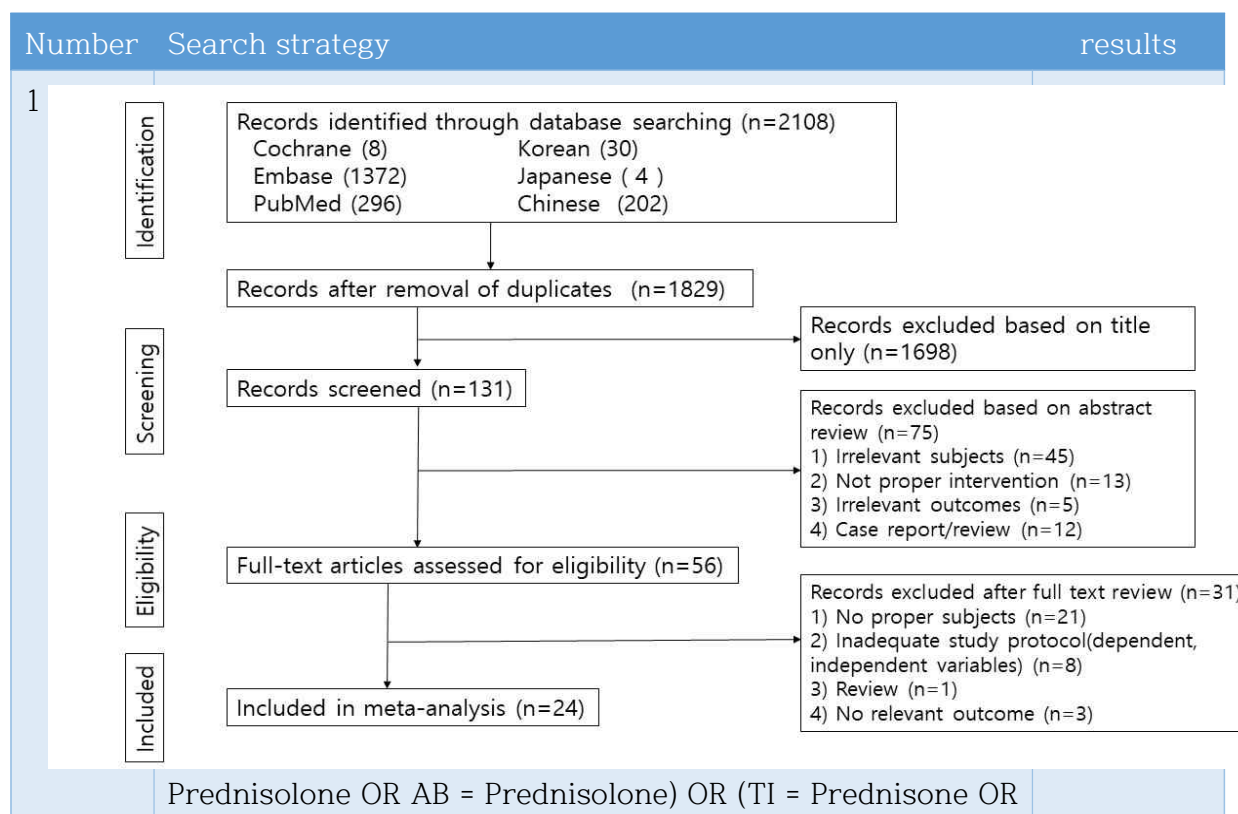
	hormone*) OR ("M. pneumoniae" AND Hydrocortisone*))	
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Japan Medical Abstracts Society, Igaku Chuo Zasshi (ICHUSHI) <http://www.jamas.or.jp>

Numbers	Search strategy	results
1	"Mycoplasma pneumoniae"/AL	75
2	"M. pneumoniae"/AL	0
3	"Mycoplasma pneumonia"/AL	78
4	"Primary Atypical Pneumonia"/AL	0
5	"Mycoplasma pneumoniae pneumonia"/AL	1
6	"Mycoplasma pneumonias"/AL	0
7	#1 or #2 or #3 or #4 or #5 or #6	78
8	Antiinflammatories/AL	0
9	"Anti-inflammatories"/AL	0
10	"Antiinflammatory Agents"/AL	0
11	"Anti-Inflammatory Agents"/AL	1
12	Steroid/AL	1251
13	Glucocorticoid/AL	174
14	Prednisolone/AL	1831
15	Prednisone/AL	29
16	Methylprednisolone/AL	652
17	"Methyl-prednisolone"/AL	0
18	Solumedrol/AL	0
19	"Solu-medrol"/AL	0
20	"Adrenal cortex hormone"/AL	0
21	Hydrocortisone/AL	225
22	#8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21	3410

23	#7 and # 22	4
24	((“Mycoplasma pneumoniae”/AL) or (“M. pneumoniae”/AL) or (“Mycoplasma pneumonia”/AL) or (“Primary Atypical Pneumonia”/AL) or (“Mycoplasma pneumoniae pneumonia”/AL) or (“Mycoplasma pneumonias”/AL)) and ((Antiinflammatories/AL) or (“Anti-inflammatories”/AL) or (“Antiinflammatory Agents”/AL) or (“Anti-Inflammatory Agents”/AL) or (Steroid/AL Glucocorticoid/AL) or (Prednisolone/AL) or (Prednisone/AL) or (Methylprednisolone/AL) or (“Methyl-prednisolone”/AL) or (Solumedrol/AL) or (“Solu-medrol”/AL) or (“Adrenal cortex hormone”/AL) or (Hydrocortisone/AL))	4

China National Knowledge Infrastructure (CNKI) <http://www.cnki.net>



	AB = Prednisone) OR (TI = Methylprednisolone OR AB = Methylprednisolone) OR (TI = Methyl-prednisolone OR AB = Methyl-prednisolone) OR (TI = Solumedrol OR AB = Solumedrol) OR (TI = Solu-medrol OR AB = Solu-medrol) OR (TI = “Adrenal cortex hormone” OR AB = “Adrenal cortex hormone”) OR (TI = Hydrocortisone OR AB = Hydrocortisone)))	
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③ Preferred Reporting Items for Systematic Reviews and Meta-Analyses flowchart

핵심질문 4. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 정주용 면역글로불린 병용 치료는 마크로라이드 치료 대비 비교·효과적인가?

① 검색자료원

- Pubmed, Cochrane library, EMBASE

- Korean database: KoreaMed (<https://koreamed.org>), National Digital Science Library (NDSL, <http://www.ndsl.kr>), Korean medical database (KMBASE, <http://kmbase.medric.or.kr/>), Research Information Sharing Service (RISS, <http://www.riss.kr>), Korean studies Information Service System (KISS, <http://kiss.kstudy.com/>)

- Japan database: Japan Medical Abstracts Society, Igaku Chuo Zasshi (ICHUSHI, <http://www.jamas.or.jp>)

- Chinese database: China National Knowledge Infrastructure (CNKI, <http://www.cnki.net>)

② 검색식

PubMed

Numbers	Search strategy	results
1	Mycoplasma pneumoniae[MeSH Terms]	2758
2	"Mycoplasma pneumoniae"[Title/Abstract]	5280
3	"M. pneumoniae"[Title/Abstract]	2179
4	#2 OR #3	5553
5	#1 OR #4	5897
6	Pneumonia, Mycoplasma[MeSH Terms]	3603
7	"Mycoplasma pneumonia"[Title/Abstract]	572
8	"Primary Atypical Pneumonia"[Title/Abstract]	315

9	"Mycoplasma pneumoniae pneumonia"[Title/Abstract]	362
10	"Mycoplasma pneumonias"[Title/Abstract]	15
11	#7 OR #8 OR #9 OR #10	1224
12	#6 OR #11	4062
13	#5 OR #12	7414
14	Immunoglobulins [MeSH Terms]	809669
15	Immunoglobulin [Title/Abstract]	116261
16	Immunoglobulins[Title/Abstract]	30248
17	"Immunoglobulin"[Title/Abstract]	3006
18	#15 OR #16 OR #17	141210
19	# 14 OR #18	855164
20	Gamma-globulins[MeSH Terms]	20008
21	Gamma-globulins[Title/Abstract]	1860
22	#20 or #21	20925
23	#19 or #22	855711
24	#13 AND #22	1497

EMBASE

Numbers	Search strategy	results
1	'Mycoplasma pneumoniae'/exp	6596
2	'Mycoplasma pneumoniae':ab,ti	6379
3	#1 OR #2	8532
4	'M. pneumoniae':ab,ti	2567
5	'Mycoplasma pneumonia'/exp	3742
6	'Mycoplasma pneumonia':ab,ti	802
7	'Primary atypical pneumonia':ab,ti	310
8	'Mycoplasma pneumoniae pneumonia':ab,ti	437

9	#6 OR #7 OR #8	1507
10	#5 OR #9	4304
11	'Mycoplasma pneumonias':ab,ti	20
12	#3 OR #4 OR #10 OR #11	10609
13	'Immunoglobulin'/exp	433921
14	Immunoglobulin:ab,ti	137584
15	Immunoglobulins:ab,ti	37587
16	'Immunoglobulin':ab,ti	3909
17	'gamma globulins':ab,ti	1514
18	#14 OR #15 OR #16 OR #17	170287
19	#13 OR #18	488566
20	#12 AND #19	1271

Cochrane library

Numbers	Search strategy	results
1	MeSH descriptor: [Mycoplasma pneumonia] explode all trees	24
2	"Mycoplasma pneumoniae":ab,ti	113
3	"M. pneumoniae":ab,ti	43
4	#2 OR #3	117
5	#1 OR #4	120
6	MeSH descriptor: [Pneumonia, Mycoplasma] explode all trees	40
7	"Mycoplasma pneumonia":ab,ti	2121
8	"Primary atypical pneumonia":ab,ti	2
9	"Mycoplasma pneumoniae pneumonia":ab,ti	14
10	"Mycoplasma pneumonia":ab,ti	0
11	#7 OR #8 OR #9 OR #10	35

12	#6 OR #11	65
13	#5 OR #12	145
14	MeSH descriptor: [Immunoglobulins] explode all trees	18091
15	immunoglobulin:ab,ti	3644
16	immunoglobulins:ab,ti	674
17	"immune globulin":ab,ti	370
18	#15 OR #16 OR #17	4451
19	# 14 OR #18	20387
20	#14 OR #19	162
21	MeSH descriptor: [Gamma-Globulins] explode all trees	21
22	#20 or #21	176
23	#19 or #22	20396
24	#13 and #23	8

Korea database

Databases	Search strategy	results
NDSL	("mycoplasma pneumoniae") OR ("M. pneumoniae") OR ("mycoplasma pneumonia") OR ("Primary Atypical Pneumonia") OR ("Mycoplasma pneumoniae pneumonia") OR ("Mycoplasma Pneumonias")) AND ((immunoglobulin) OR (Immunoglobulins) OR ("immune globulin") OR (gamma-Globulins))	10
KMBASE	(((((ALL=mycoplasma pneumoniae] OR [ALL=M. pneumoniae]) OR [ALL=mycoplasma pneumonia]) OR [ALL=Primary Atypical Pneumonia]) OR [ALL=Mycoplasma pneumoniae pneumonia]) OR [ALL=Mycoplasma Pneumonias]) AND ((([ALL=Immunoglobulin] OR [ALL=Immunoglobulins]) OR [ALL=immune globulin]) OR	15

	[ALL=gamma-Globulins])	
KoreaMed	("mycoplasma pneumoniae" [ALL] OR "M. pneumoniae" [ALL] OR "mycoplasma pneumonia" [ALL] OR "Primary Atypical Pneumonia" [ALL] OR "Mycoplasma pneumoniae pneumonia" [ALL] OR "Mycoplasma Pneumonias" [ALL] AND (Immunoglobulin [ALL] OR Immunoglobulins [ALL] OR "Immune globulin" [ALL] OR "gamma-Globulins" [ALL])	40
RISS	(mycoplasma pneumonia*) AND (Immunoglobulin)	12
KISS	(mycoplasma pneumonia*) AND (Immunoglobulin*)	13

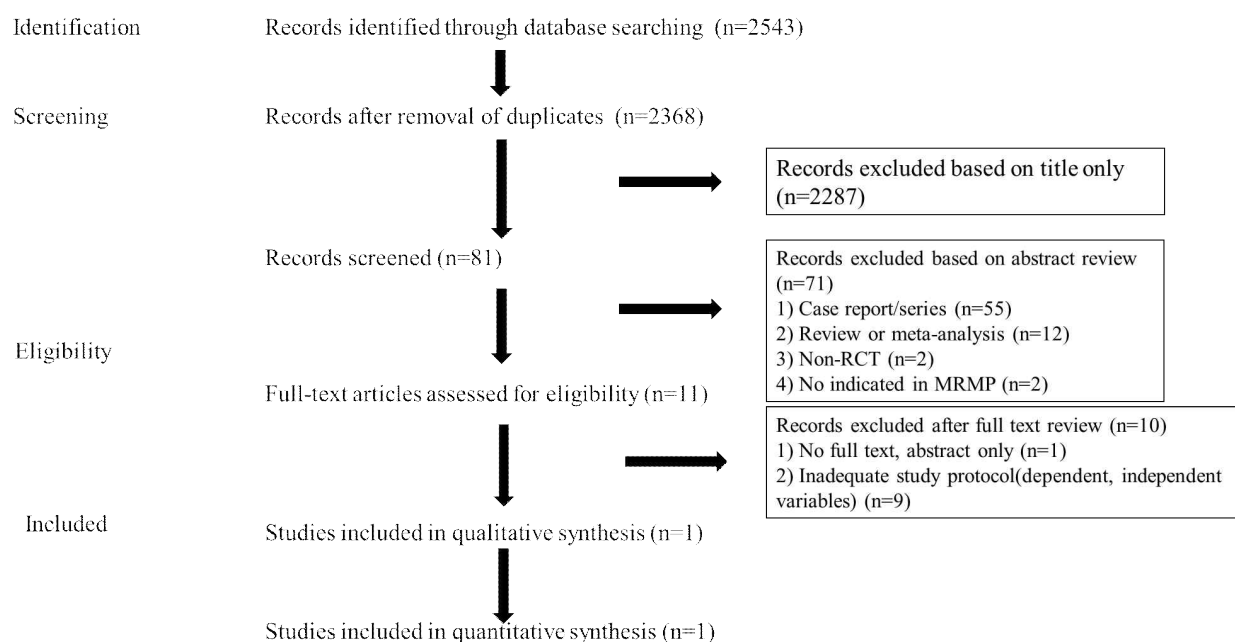
Japan Medical Abstracts Society, Igaku Chuo Zasshi (ICHUSHI) <http://www.jamas.or.jp>

Numbers	Search strategy	results
1	"Mycoplasma pneumoniae"/TA	40
2	"M. pneumoniae"/TA	0
3	"Mycoplasma pneumonia"/TA	43
4	"Primary Atypical Pneumonia"/TA	0
5	"Mycoplasma pneumoniae pneumonia"/TA	1
6	"Mycoplasma pneumonias"/TA	0
7	#1 or #2 or #3 or #4 or #5 or #6	43
8	Immunoglobulin/TA	87
9	Immunoglobulins/TA	4
10	"Immunoglobulin"/TA	0
11	Gamma-globulins/TA	0
12	#8 or #9 or #10 or #11	87
13	#7 or #12	0

China National Knowledge Infrastructure (CNKI) <http://www.cnki.net>

Number	Search strategy	results
1	((((TI = "mycoplasma pneumoniae" OR AB = "mycoplasma pneumoniae") OR (TI = M. pneumoniae" OR AB = "M pneumoniae") OR (TI = "mycoplasma pneumonia" OR AB = "mycoplasma pneumonia") OR (((TI = "Primary Atypical Pneumonia" OR AB = "Primary Atypical Pneumonia") OR (TI = "mycoplasma pneumoniae pneumonia" OR AB = "mycoplasma pneumoniae pneumonia") OR (TI = "mycoplasma pneumonias" OR AB = "mycoplasma pneumonias")) AND ((TI = Immunoglobulin OR AB = Immunoglobulins) or (TI = "Immune globulin" OR AB = "Immune globulin") OR (TI = 'gamma-globulins' OR AB = 'Gamma-globulins'))	64

③ Preferred Reporting Items for Systematic Reviews and Meta-Analyses flowchart



5. 근거표

핵심질문 1: 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 비마크로라이드 항균제(테트라사이클린제, 퀴놀론제) 치료는 마크로라이드 치료 대비 비교·효과적인가?

1) 근거 합성에 포함된 연구의 특징

Study	Study design	Characteristics				Intervention		Outcome
		Country	Period, year	Number of subjects: mean age of experimental group, y	Number of subjects: mean age of control group	Experimental group	Control group	
Zhang Q 2016 ³	Randomized controlled study	China	2010-2014	28; 10.3±1.7 (8-14yr)	29; 10.1±1.7 (8-14yr)	minocycline 100 mg twice daily for two weeks	clarithromycin 250 mg, 3 times per day, 2 weeks	fever duration, hospital day
Han X	Randomized	China	2012-	29;	30;	based on	azithromycin 10	fever

2016	controlled study		2015	9.54±1.20	10.32±1.76	azithromycin, add minocycline hydrochloride, 4 mg/kg for the first time, then change to 2 mg/kg per 12 hours for 5d.	mg/kg/d for 5d, stop for 3 days, prn 2 courses of treatment	duration, hospital day
Li J 2017	Randomized controlled study	China	2016	21; 10.54±0.38 (8-14 yr)	21; 10.61±0.36 (9-14 yr)	azithromycin 10mg/kg/d+ minocycline 50mg twice daily	azithromycin 10mg/kg/d	fever duration
Ishiguro N, 2017	Prospective observational study	Japan	2013-2015	12	47	minocycline 2-4 mg/kg/d for 2-4 days; tosylfloxacin at 12mg/kg/d for 3-7 days	azithromycin 10 mg/kg/day for 3 days, clarithromycin 10-15 mg/kg/day for 3-7 days	defervescence rate within 24, 48, and 72 h after antibiotic administration
Kawai Y, 2012	Prospective observational study	Japan	2005-2010	15: 7.4 (1-15)	6: 8.4 (2-14)	minocycline 2-4 mg/kg/d	azithromycin 10 mg/kg/day; clarithromycin 10-15 mg/kg/day;	defervescence rate within 48 h after antibiotic administration
Kawai Y, 2013	Prospective observational study	Japan	2005-2012	100: tosylfloxacin 6.5 (0-15), minocycline 9.8 (1-15)(7 cases <8yr of age)	50: 8.0 (range: 1-15)	minocycline 4 mg/kg/d; tosylfloxacin 12 mg/kg/d	azithromycin 10 mg/kg once daily, clarithromycin 15 mg/kg twice daily	defervescence rate within 48 h after antibiotic administration
Okada T, 2012	Prospective observational study	Japan	2011	81: 8 (1-14)	13: 8 (1-14)	minocycline 4mg/kg/d; doxycycline 4mg/kg/d; tosylfloxacin 12 mg/kg/d		defervescence rate within 24, 48, and 72 h after antibiotic administration

								tion
Ye H, 2016	Prospective observational study	China	2015	23: 9.2±1.6	21: 9.3±1.0	doxycycline 4 mg/kg/d	azithromycin 10 mg/kg/d	defervescence rate within 24, 48, 72 h after antibiotic administration

2) 근거 요약표

① Summary of evidence (randomized controlled trials)

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Tetracyclines	Macrolides	Relative (95% CI)	Absolute (95% CI)		
Fever duration after treatment												
3	randomized trials	very serious ^a	not serious	not serious	not serious	none	78	100	-	MD 1.45 lower (2.51 lower to 0.4 lower)	⊕⊕⊕⊕ LOW	
Efficacy												

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Tetracyclines	Macrolides	Relative (95% CI)	Absolute (95% CI)		
2	randomized trials	serious ^a	not serious	not serious	not serious	none	43/49 (87.8%)	23/50 (46.0%)	OR 8.80 (3.12 to 24.82)	422 more per 1,000 (from 267 more to 495 more)	⊕⊕⊕⊕ MODERATE	
Length of stay												
2	randomized trials	serious ^a	not serious	not serious	not serious	none	57	59	-	MD 3.33 lower (4.32 lower to 2.35 lower)	⊕⊕⊕⊕ MODERATE	

CI: Confidence interval; MD: Mean difference; OR: Odds ratio

a. random에 대한 설명, blind가 없다

② Summary of evidence (prospective observational studies)

Certainty assessment							№ of patients		Effect		Certai nty	Importa nce
№ of studi es	Study design	Risk of bias	Inconsist ency	Indirect ness	Impreci sion	Other considerat ions	interven tion	cont rol	Relat ive (95% CI)	Absol ute (95% CI)		
Tosufloxacin-macrolide (24 hr-defervescence)												

Certainty assessment							№ of patients		Effect		Certainty	Importance
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	intervention	control	Relative (95% CI)	Absolute (95% CI)		
2	observational studies	serious ^a	not serious	not serious	serious ^b	none	4/21 (19.0%)	5/60 (8.3%)	OR 1.11 (0.25 to 5.00)	8 more per 1,000 (from 61 fewer to 229 more)	⊖⊖⊖ ○ VERY LOW	
Tetracyclines-macrolides (24 hr-defervescence)												
2	observational studies	serious ^a	not serious	not serious	serious ^b	strong association	51/91 (56.0%)	5/34 (14.7%)	OR 5.34 (1.81 to 15.75)	332 more per 1,000 (from 91 more to 584 more)	⊖⊖⊖ ○ VERY LOW	
Tosufloxacin-macrolide (48h-defervescence)												
3	observational studies	serious ^a	not serious	not serious	serious ^b	none	52/83 (62.7%)	29/110 (26.4%)	OR 2.78 (1.41 to 5.51)	235 more per 1,000 (from 72 more to 400 more)	⊖⊖⊖ ○ VERY LOW	
Tetracyclines-macrolides (48h-defervescence)												

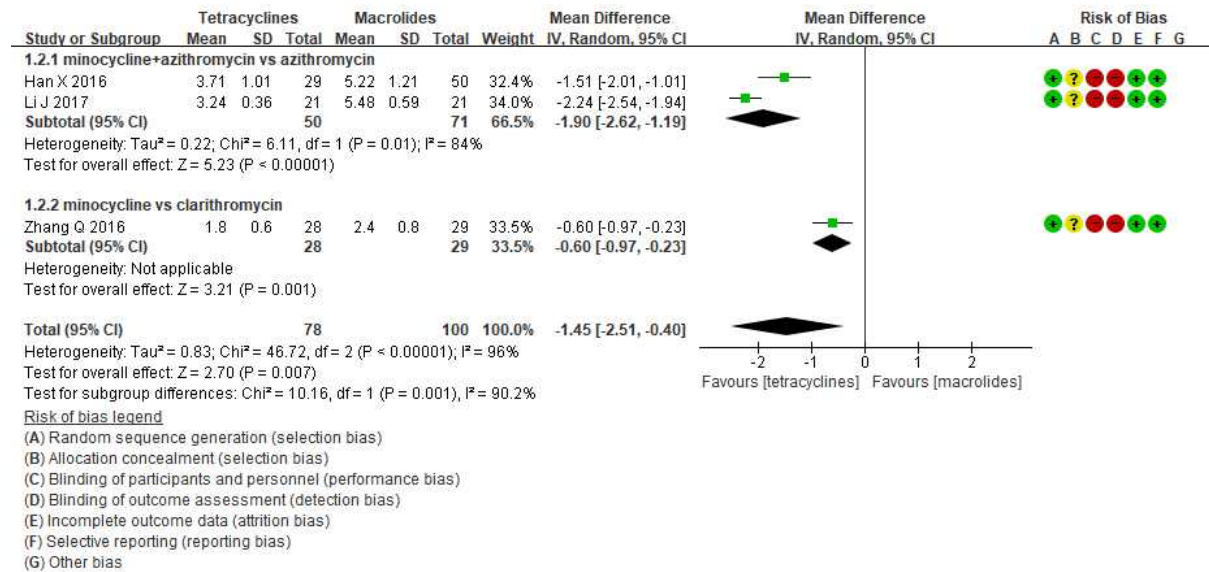
Certainty assessment							No of patients		Effect		Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	intervention	control	Relative (95% CI)	Absolute (95% CI)		
5	observational studies	serious ^a	not serious	not serious	not serious ^b	strong association	136/148 (91.9%)	39/152 (25.7%)	OR 18.37 (8.87 to 38.03)	607 more per 1,000 (from 497 more to 673 more)	⊕⊕⊕ ○ LOW	
Tosufloxacin-tetracyclines (48h-defervescence)												
2	observational studies	serious ^a	not serious	not serious	serious ^b	none	52/75 (69.3%)	94/106 (88.7%)	OR 0.32 (0.13 to 0.76)	172 fewer per 1,000 (from 31 fewer to 382 fewer)	⊕⊕⊕ ○ VERY LOW	
Tetracyclines-macrolides (72h-defervescence)												
2	observational studies	serious ^a	not serious	not serious	serious ^b	none	90/91 (98.9%)	19/34 (55.9%)	OR 40.77 (6.15 to 270.12)	422 more per 1,000 (from 327 more to 438 more)	⊕⊕⊕ ○ VERY LOW	

CI: Confidence interval; OR: Odds ratio

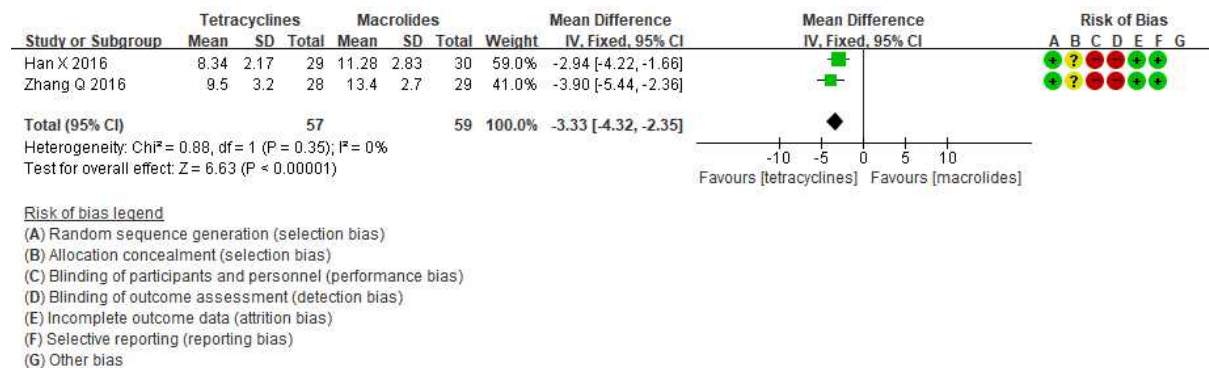
- 환자 배정이 의사의 주관적 판단에 근거, 교란 변수에 대한 보정이 불분명하다.
- 표본수는 OIS (optimal information size)보다 작고, 신뢰구간이 효과 없음

3) The Cochrane Collaboration's tool for assessing risk of bias

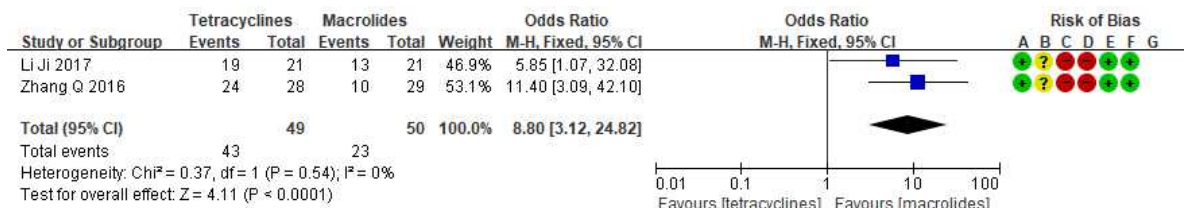
① 발열 기간



② 입원 기간



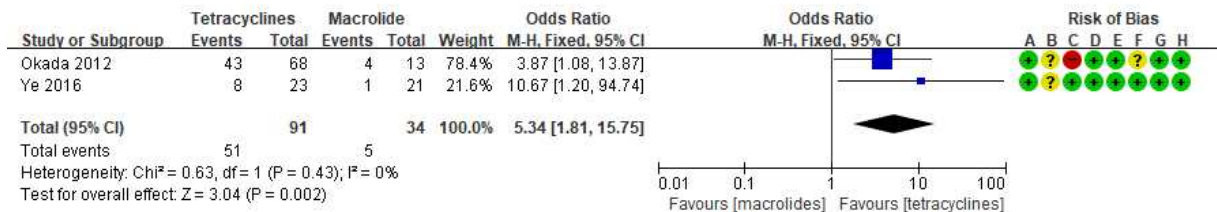
③ 치료 효과



Risk of bias legend

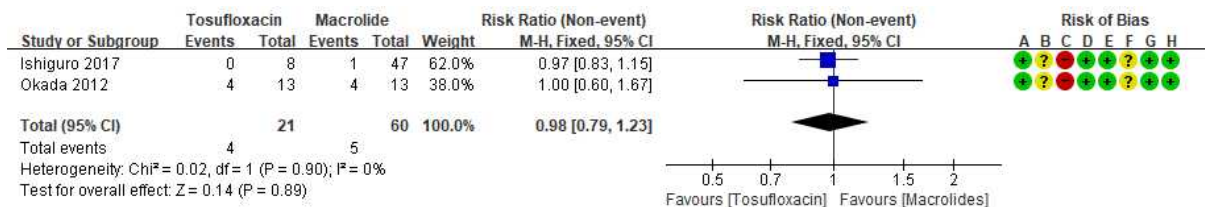
- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

④ 24시간 이내 발열 호전 비율 비교



Risk of bias legend

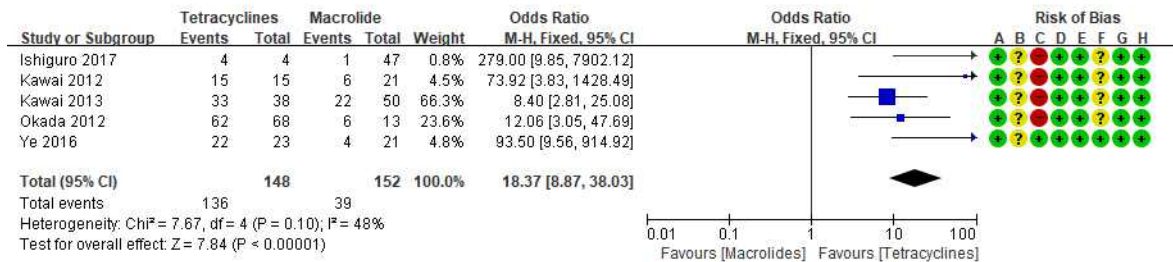
- (A) 대상자 선정
- (B) 대상자 비교가능성
- (C) 교란변수
- (D) 노출측정
- (E) 평가자의 눈가림
- (F) 결과 평가
- (G) 불완전한 결과자료
- (H) 선택적 결과보고



Risk of bias legend

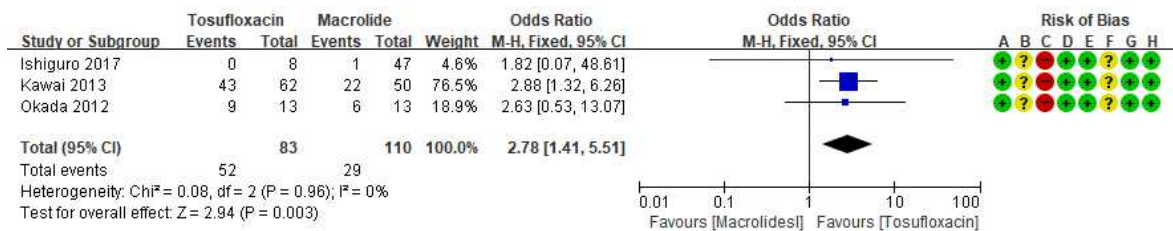
- (A) 대상자 선정
- (B) 대상자 비교가능성
- (C) 교란변수
- (D) 노출측정
- (E) 평가자의 눈가림
- (F) 결과 평가
- (G) 불완전한 결과자료
- (H) 선택적 결과보고

⑤ 48시간 이내 발열 호전 비율 비교



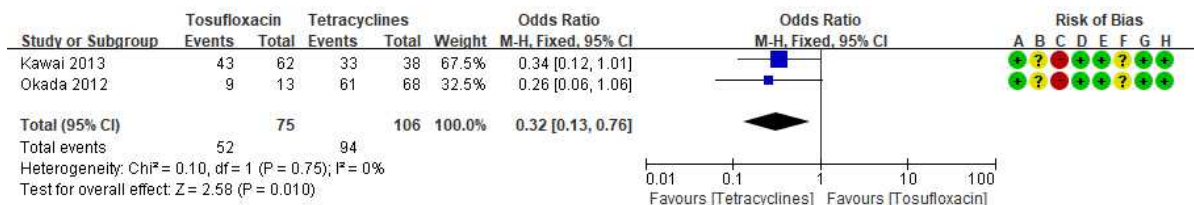
Risk of bias legend

- (A) 대상자 선정
- (B) 대상자 비교가능성
- (C) 교란변수
- (D) 노출측정
- (E) 평가자의 눈가림
- (F) 결과 평가
- (G) 불완전한 결과자료
- (H) 선택적 결과보고



Risk of bias legend

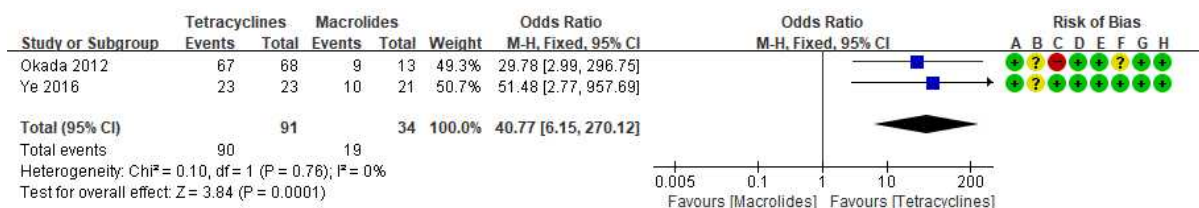
- (A) 대상자 선정
- (B) 대상자 비교가능성
- (C) 교란변수
- (D) 노출측정
- (E) 평가자의 눈가림
- (F) 결과 평가
- (G) 불완전한 결과자료
- (H) 선택적 결과보고



Risk of bias legend

- (A) 대상자 선정
- (B) 대상자 비교가능성
- (C) 교란변수
- (D) 노출측정
- (E) 평가자의 눈가림
- (F) 결과 평가
- (G) 불완전한 결과자료
- (H) 선택적 결과보고

㉔ 72시간 이내 해열 정도



Risk of bias legend

- (A) 대상자 선정
- (B) 대상자 비교가능성
- (C) 교란변수
- (D) 노출측정
- (E) 평가자의 눈가림
- (F) 결과 평가
- (G) 불완전한 결과자료
- (H) 선택적 결과보고

핵심질문 2. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 코르티코스테로이드 제 병용 치료는 마크로라이드 치료 대비 비교·효과적인가?

1) 근거 합성에 포함된 연구의 특징

Study		Characteristics			Intervention		Outcome	
		Country	Year	Number of subjects: mean age of experiment group, y	Number of subjects: mean age of control group	Experimental group	Control group	
FAN	Xuwei	China	2012-2015	44: 8.2±2.7	43: 7.2±2.1	2 mg/kg/d of methylprednisolone for 5 consecutive days then received 1mg/kg/d for 2 days.	oral administration Azithromycin tablets (10mg/kg; max. dose 0.5g) for 1 day then received 5mg/kg of azithromycin through day 2-5 (max. dose 0.25g)	Fever duration, Hospital day, CRP change
FENG	Xiaoqiang	China	2013-2015					Fever duration, Hospital day, Cough duration, Improvement of chest x-ray
Jl	Chaoyu	China	2014-2016	50: 5.1±0.3	50: 4.9±0.5	2mg/kg/d of intravenous methylprednisolone for 3d.	daily intravenous infusion of azithromycin (10mg/kg/d)	Fever duration, Cough duration
LI	Ling	China	2013-2014	53: 6.5±2.1	51: 6.6±1.9	low-dose methylprednisolone 2 mg/kg/d for 3-5 days	Erythromycin intravenous drip 1 week, then change to	Fever duration, Hospital days, Cough

						<p>Azithromycin intravenous drip for 3 days, stop for 4days, then oral take Azithromycin Tablets for 3days, then stop for 4days then oral take Azithromycin Tablets for 3days again), with 3rd generation cephalosporins.</p>	<p>duration, Change in chest x-ray, CRP change</p>
LI Ming 2015	China	2013-2014	50; 3.1±0.4	50; 3.2±0.2	<p>intravenous administration of Prednisolone sodium succinate 1~2 mg/(kg/d) for 3days, then changed to oral administration of Prednisone 1~2 mg/(kg/d), then stopped 7~10d of tapering</p>	<p>daily intravenous administration of Azithromycin 10mg/(kg/d) for 3~5d, then stopped for 3d. Sequential therapy with daily administration of Azithromycin Dry suspension 10mg/(kg/d) for 3days then stopped for 4days, and repeated for total course of treatment of 1month</p>	<p>Fever duration, Hospital days, Cough duration, CRP change</p>
LIN Jianqin 2015	China	2012-2015	42; 6.4±1.2	41; 6.1±1.3	<p>intravenous administration of methylprednisolone 1 mg/kg/time, 2 times/day, for 3days, then changed to oral</p>	<p>Daily intravenous administration of azithromycin 10mg/kg, for 3~5d then oral administration</p>	<p>Fever duration, Cough duration, Time to normalization of chest</p>

					administration of methylprednisolone, 1 mg/kg/time, 2 times/day.	of azithromycin 10mg/kg/d for 3d stop for 4day. Oral administration was repeated for 2~3 times during course of treatment	x-ray
LIN Yan 2015	China	2012-2015	45: 6.4±3.2	45: 6.7±3.3	intravenous infusion of dexamethasone 0.2~0.3 mg/(kg/d) for 5 d	intravenous infusion of Azithromycin and gamma globulin,	Fever duration, Hospital day, Cough duration, Time to normalization of chest x-ray, CRP change
LIU Chunyan 2017	China	2015-2016	52: 5.8±4.0	52: 5.6±4.2	methylprednisolone pulse therapy: 1~2 mg/kg/d, with intravenous micropump injection for 3d.	intravenous infusion of immunoglobulin 400mg/(kg/d) for 2d; intravenous infusion of azithromycin 10mg/(kg/d) for 5d.	Fever duration, Time to normalization of chest x-ray
LIU Qing 2016	China	2013-2015	74:	62:	Intravenous infusion of methylprednisolone 2mg/(kg/d) was administered until 24 hours after defervescence. Oral prednisone was started with 1~2mg/(kg/d) then tapered for 7-14d	intravenous infusion of azithromycin 10mg/kg/d for 5d then stop 4d and repeat for 2-3 cycles	Fever duration
LU Xiaoyun.2017	China	2014-2015	53: 6.59±1.57	52: 6.80±1.43	intravenous infusion of methylprednisolone 2mg/kg/d for 5d	10mg/kg of oral Azithromycin for 1 day continued by	Fever duration, Cough duration,




						5mg/kg of azithromycin from day 2-5.	Time to normalization of chest x-ray, CRP change
QIU Haiyan.2017	China	2015-2016	50: 6.91±2.16	50: 6.85±2.10	methylprednisolone 1~2mg/kg/d	intravenous infusion azithromycin 10mg/(kg/d) was used until symptom improvement then changed to daily oral Azithromycin suspension 10mg/kg/d.	Fever duration, Cough duration, CRP change
REN Mingxing 2015	China	2011-2013	33: 8.9±2.4	34: 9.3±3.0	Methylprednisolone 2mg/kg/d for 5days then reduced to 1mg/kg/d for 2d.	intravenous infusion of Aspartate azithromycin 10mg/(kg/d) for 3d; intravenous infusion of gamma globulin 1.5g/k, 1 time/day, for 3d; intravenous infusion of rifampicin 10mg/kg, 12h/time, for 4 times, used for 3days then stopped for 4day then change to oral administration of Azithromycin 10 mg/(kg/d), for 3 days then stopped for 4days. Total duration of	Fever duration, Hospital days, CRP change

						treatment was 7days for one course of treatment and continued for 3 weeks	
Shan 2017	China	2013-2015	52; 7.36 ± 2.33	50; 7.29 ± 3.03	Oral or intravenous methylprednisolone 2mg/kg/d, for 3 days	intravenous azithromycin	Fever duration, CRP change, LDH change, D-dimer change
SHAO Xiaoli 2011	China	2008-2010	38; 6.37±2.83	38; 6.87±2.86	small dose of methylprednisolone for 3-4 weeks	Macrolide antibiotics	Fever duration, Hospital days, Cough duration, chest X-ray change
TAO Xuyun 2015	China	2013-2014	75; 7.4±1.4	75; 7.3±1.3	Intravenous methylprednisolone 2mg/kg/d for 4-5 days on 5-7 day of treatment (dose increased to 4mg/kg/d according to patient symptoms). Then reduced to 1 mg/kg/d for 3 days after defervescence.	Intravenous azithromycin (10 mg/kg/d) for 3 days then stopped for 4days. Followed by oral azithromycin for 3 days then stopped for 4 days continued for 3 weeks with ceftazidime	Fever duration, Hospital day, Cough duration, Change in chest X-ray, CRP change
WANG Hao 2016	China	2013-2015	40; 5.10±1.86	40; 4.86±1.35	4 consecutive days with 2mg/kg/d of methylprednisolone then reduced to 1mg/kg/d	Daily intravenous infusion of Azithromycin 10mg/kg/d for 3d. Then changed to 5mg/kg/d of oral Azithromycin, 3times/day, for 3days then	Fever duration, Hospital day, CRP change

						stopped for 4d	
WEN Jianjun 2016	China		65: 7.1±4.5	65: 7.7±4.5	intravenous infusion of methylprednisolone (2 mg/d, 1-2 times and reduced as symptoms improved	Azithromycin 10mg/kg/d for 3d then stopped for 4d. Changed to oral Azithromycin after symptoms improve	Fever duration, Hospital days
Wu Yourong 2017	China	2013-2014			Methylprednisolone 2mg/kg/d, for 3d. Then changed to 1mg/kg/d for 2d.	Intravenous infusion of Aspartate azithromycin 10mg/kg/d for 3days. After 3 consecutive days of treatment, oral azithromycin, 10 mg/kg/d, was administered for 3d then stopped for 4d	Fever duration, Hospital days
XU Jiali 2017	China	2015-2017	60: 6.8±1.6	60: 7.1±2.5	oral intake of methylprednisolone 2mg/kg/d for 3-5d on 2nd day of treatment	daily oral intake of azithromycin 10mg/(kg/d) for 3d then stopped for 4d then repeated for 3-4 times	Fever duration, Hospital days, Cough duration, CRP change
YANG Lijun 2015	China	2012-2014	20	20	intravenous administration of methylprednisolone 1mg/kg/d for 2 weeks	intravenous infusion of Azithromycin 7~10mg/kg/d	Fever duration, Hospital days, Cough duration,
YU Jieming 2017	China	2014-2015	35: 5.6±2.7	35: 5.7±2.3	Intravenous infusion of methylprednisolone 2mg/kg/d, 2 times/day.	Intravenous infusion of erythromycin 20-30mg/kg/d, 2time/day. Change to oral azithromycin 10 mg/kg/d after	Fever duration, Cough duration, CRP change

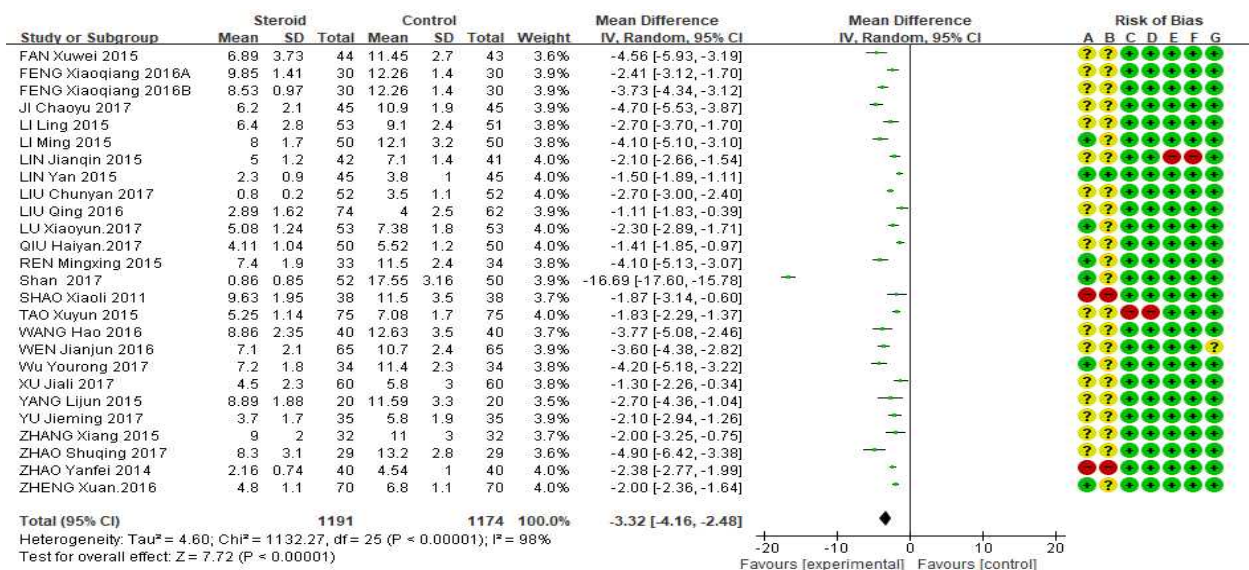
						48 hours of defervescence	
ZHANG Xiang 2015	China	2012-2013	32: 5±2	32: 4±1	Intravenous infusion of urbason 1-2 mg/(kg/d) with nebulized budesonide, for 3~5d; If symptoms don't improve, oral administration of methylprednisolone was given for 3~5d.	Intravenous infusion of erythromycin 20~30 mg/kg/d, for 2 times, for 7days; followed by oral administration of Azithromycin 10mg/kg/d, (max. dose 0.5g/d), for 3d then stopped for 4d.	Fever duration, Hospital days
ZHAO Shuqing 2017	China	2013-2015	29: 5.7±2.4	29: 5.3±2.5	Daily intravenous methylprednisolone 1.5-2.0mg/kg/d for 3days, then changed to 1mg/kg/d and tapering within 1 week	Intravenous azithromycin 10mg/kg/d on the 1st day, 5mg/kg/d from 2nd to 5th day, 5 days as a total treatment course.	Fever duration, Cough duration, CRP change
ZHENG Xuan.2016	China	2015-2016	70: 5.5±0.5	70: 5.1±0.6	Intravenous infusion of methylprednisolone 2mg/kg/d, for 3d	intravenous infusion of azithromycin 10mg/kg/d in 3times/day	Fever duration, Cough duration, CRP change

2) 근거 요약표

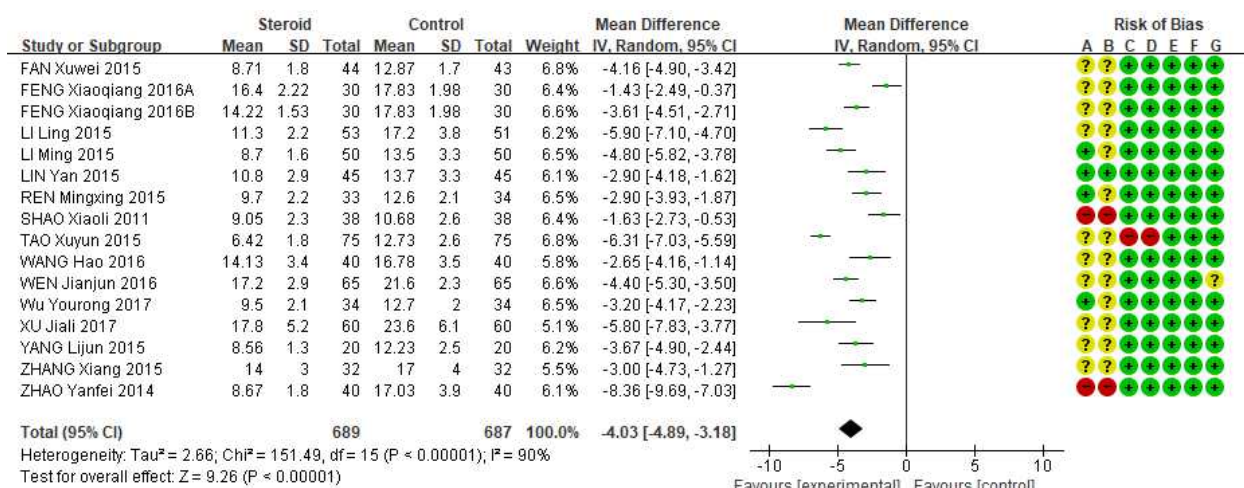
Certainty assessment							N _o of patients		Effect		Certainty	Importance
N _o of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Steroids for MRMP Treatment	placebo	Relative (95% CI)	Absolute (95% CI)		
Fever duration												
24	randomised trials	not serious	serious	not serious	not serious	none	1151	1134	-	MD 2.66 lower (2.78 lower to 2.53 lower)	 MODERATE	CRITICAL
Hospital Days												
15	randomised trials	not serious	serious	not serious	not serious	none	649	647	-	MD 3.96 lower (4.23 lower to 3.69 lower)	 MODERATE	IMPORTANT
CRP level after treatment												
14	randomised trials	not serious	serious	not serious	not serious	none	693	677	-	MD 5.97 lower (6.39 lower to 5.54 lower)	 MODERATE	IMPORTANT

3) The Cochrane Collaboration's tool for assessing risk of bias

① 발열 기간



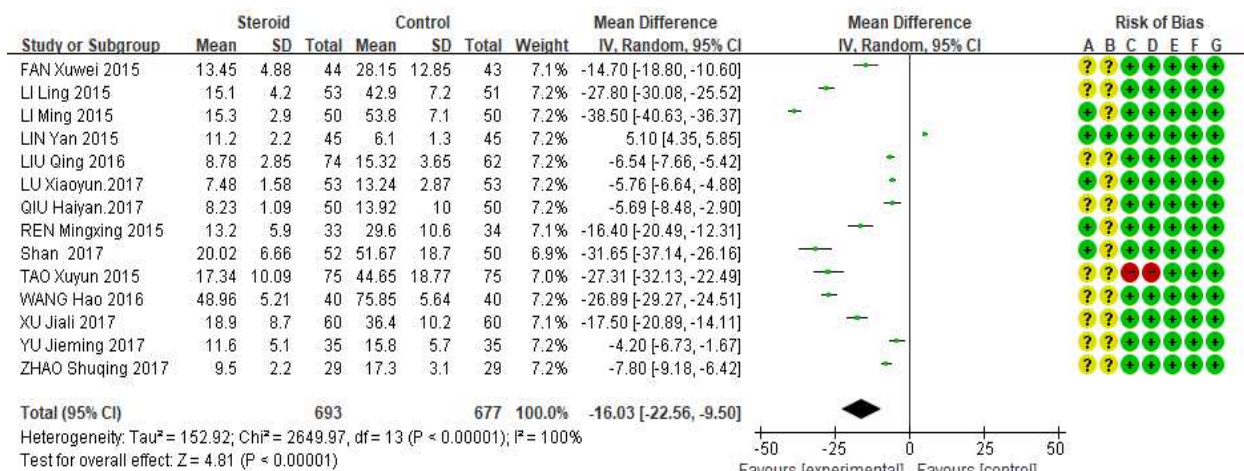
② 입원 기간



Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

③ C-reactive protein 변화



Risk of bias legend

- (A) Random sequence generation (selection bias)
- (B) Allocation concealment (selection bias)
- (C) Blinding of participants and personnel (performance bias)
- (D) Blinding of outcome assessment (detection bias)
- (E) Incomplete outcome data (attrition bias)
- (F) Selective reporting (reporting bias)
- (G) Other bias

핵심질문 3. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 경구용 코르티코스테로이드제 치료는 정주용 코르티코스테로이드제 치료 대비 비교·효과적인가?

1) 근거 합성에 포함된 연구의 특징

Study		Characteristics			Intervention		Outcome	
		Country	Year	Number of subjects: mean age of experiment group, y	Number of subjects: mean age of control group	Experimental group	Control group	
FAN	Xuwei	China	2012-2015	44: 8.2±2.7	43: 7.2±2.1	2 mg/kg/d of methylprednisolone for 5 consecutive days then received 1mg/kg/d for 2 days.	oral administration Azithromycin tablets (10mg/kg; max. dose 0.5g) for 1 day then received 5mg/kg of azithromycin through day 2-5 (max. dose 0.25g)	Fever duration, Hospital day, CRP change
FENG	Xiaoqiang	China	2013-2015					Fever duration, Hospital day, Cough duration, Improvement of chest x-ray
Jl	Chaoyu	China	2014-2016	50: 5.1±0.3	50: 4.9±0.5	2mg/kg/d of intravenous methylprednisolone for 3d.	daily intravenous infusion of azithromycin (10mg/kg/d)	Fever duration, Cough duration
LI	Ling	China	2013-2014	53: 6.5±2.1	51: 6.6±1.9	low-dose methylprednisolone 2 mg/kg/d for 3-5 days	Erythromycin intravenous drip 1 week, then change to	Fever duration, Hospital days, Cough

						<p>Azithromycin intravenous drip for 3 days, stop for 4days, then oral take Azithromycin Tablets for 3days, then stop for 4days then oral take Azithromycin Tablets for 3days again), with 3rd generation cephalosporins.</p>	<p>duration, Change in chest x-ray, CRP change</p>
LI Ming 2015	China	2013-2014	50; 3.1±0.4	50; 3.2±0.2	<p>intravenous administration of Prednisolone sodium succinate 1~2 mg/(kg/d) for 3days, then changed to oral administration of Prednisone 1~2 mg/(kg/d), then stopped 7~10d of tapering</p>	<p>daily intravenous administration of Azithromycin 10mg/(kg/d)for 3~5d, then stopped for 3d. Sequential therapy with daily administration of Azithromycin Dry suspension 10mg/(kg/d) for 3days then stopped for 4days, and repeated for total course of treatment of 1month</p>	<p>Fever duration, Hospital days, Cough duration, CRP change</p>
LIN Jianqin 2015	China	2012-2015	42; 6.4±1.2	41; 6.1±1.3	<p>intravenous administration of methylprednisolone 1 mg/kg/time, 2 times/day, for 3days, then changed to oral</p>	<p>Daily intravenous administration of azithromycin 10mg/kg, for 3~5d then oral administration</p>	<p>Fever duration, Cough duration, Time to normalization of chest</p>

					administration of methylprednisolone, 1 mg/kg/time, 2 times/day.	of azithromycin 10mg/kg/d for 3d stop for 4day. Oral administration was repeated for 2~3 times during course of treatment	x-ray
LIN Yan 2015	China	2012-2015	45: 6.4±3.2	45: 6.7±3.3	intravenous infusion of dexamethasone 0.2~0.3 mg/(kg/d) for 5 d	intravenous infusion of Azithromycin and gamma globulin,	Fever duration, Hospital day, Cough duration, Time to normalization of chest x-ray, CRP change
LIU Chunyan 2017	China	2015-2016	52: 5.8±4.0	52: 5.6±4.2	methylprednisolone pulse therapy: 1~2 mg/kg/d, with intravenous micropump injection for 3d.	intravenous infusion of immunoglobulin 400mg/(kg/d) for 2d; intravenous infusion of azithromycin 10mg/(kg/d) for 5d.	Fever duration, Time to normalization of chest x-ray
LIU Qing 2016	China	2013-2015	74:	62:	Intravenous infusion of methylprednisolone 2mg/(kg/d) was administered until 24 hours after defervescence. Oral prednisone was started with 1~2mg/(kg/d) then tapered for 7-14d	intravenous infusion of azithromycin 10mg/kg/d for 5d then stop 4d and repeat for 2-3 cycles	Fever duration
LU Xiaoyun.2017	China	2014-2015	53: 6.59±1.57	52: 6.80±1.43	intravenous infusion of methylprednisolone 2mg/kg/d for 5d	10mg/kg of oral Azithromycin for 1 day continued by	Fever duration, Cough duration,




						5mg/kg of azithromycin from day 2-5.	Time to normalization of chest x-ray, CRP change
QIU Haiyan.2017	China	2015-2016	50: 6.91±2.16	50: 6.85±2.10	methylprednisolone 1~2mg/kg/d	intravenous infusion azithromycin 10mg/(kg/d) was used until symptom improvement then changed to daily oral Azithromycin suspension 10mg/kg/d.	Fever duration, Cough duration, CRP change
REN Mingxing 2015	China	2011-2013	33: 8.9±2.4	34: 9.3±3.0	Methylprednisolone 2mg/kg/d for 5days then reduced to 1mg/kg/d for 2d.	intravenous infusion of Aspartate azithromycin 10mg/(kg/d) for 3d; intravenous infusion of gamma globulin 1.5g/k, 1 time/day, for 3d; intravenous infusion of rifampicin 10mg/kg, 12h/time, for 4 times, used for 3days then stopped for 4day then change to oral administration of Azithromycin 10 mg/(kg/d), for 3 days then stopped for 4days. Total duration of	Fever duration, Hospital days, CRP change

						treatment was 7days for one course of treatment and continued for 3 weeks	
Shan 2017	China	2013-2015	52; 7.36 ± 2.33	50; 7.29 ± 3.03	Oral or intravenous methylprednisolone 2mg/kg/d, for 3 days	intravenous azithromycin	Fever duration, CRP change, LDH change, D-dimer change
SHAO Xiaoli 2011	China	2008-2010	38; 6.37±2.83	38; 6.87±2.86	small dose of methylprednisolone for 3-4 weeks	Macrolide antibiotics	Fever duration, Hospital days, Cough duration, chest X-ray change
TAO Xuyun 2015	China	2013-2014	75; 7.4±1.4	75; 7.3±1.3	Intravenous methylprednisolone 2mg/kg/d for 4-5 days on 5-7 day of treatment (dose increased to 4mg/kg/d according to patient symptoms). Then reduced to 1 mg/kg/d for 3 days after defervescence.	Intravenous azithromycin (10 mg/kg/d) for 3 days then stopped for 4days. Followed by oral azithromycin for 3 days then stopped for 4 days continued for 3 weeks with ceftazidime	Fever duration, Hospital day, Cough duration, Change in chest X-ray, CRP change
WANG Hao 2016	China	2013-2015	40; 5.10±1.86	40; 4.86±1.35	4 consecutive days with 2mg/kg/d of methylprednisolone then reduced to 1mg/kg/d	Daily intravenous infusion of Azithromycin 10mg/kg/d for 3d. Then changed to 5mg/kg/d of oral Azithromycin, 3times/day, for 3days then	Fever duration, Hospital day, CRP change

						stopped for 4d	
WEN Jianjun 2016	China		65: 7.1±4.5	65: 7.7±4.5	intravenous infusion of methylprednisolone (2 mg/d, 1-2 times and reduced as symptoms improved	Azithromycin 10mg/kg/d for 3d then stopped for 4d. Changed to oral Azithromycin after symptoms improve	Fever duration, Hospital days
Wu Yourong 2017	China	2013-2014			Methylprednisolone 2mg/kg/d, for 3d. Then changed to 1mg/kg/d for 2d.	Intravenous infusion of Aspartate azithromycin 10mg/kg/d for 3days. After 3 consecutive days of treatment, oral azithromycin, 10 mg/kg/d, was administered for 3d then stopped for 4d	Fever duration, Hospital days
XU Jiali 2017	China	2015-2017	60: 6.8±1.6	60: 7.1±2.5	oral intake of methylprednisolone 2mg/kg/d for 3-5d on 2nd day of treatment	daily oral intake of azithromycin 10mg/(kg/d) for 3d then stopped for 4d then repeated for 3-4 times	Fever duration, Hospital days, Cough duration, CRP change
YANG Lijun 2015	China	2012-2014	20	20	intravenous administration of methylprednisolone 1mg/kg/d for 2 weeks	intravenous infusion of Azithromycin 7~10mg/kg/d	Fever duration, Hospital days, Cough duration,
YU Jieming 2017	China	2014-2015	35: 5.6±2.7	35: 5.7±2.3	Intravenous infusion of methylprednisolone 2mg/kg/d, 2 times/day.	Intravenous infusion of erythromycin 20-30mg/kg/d, 2time/day. Change to oral azithromycin 10 mg/kg/d after	Fever duration, Cough duration, CRP change

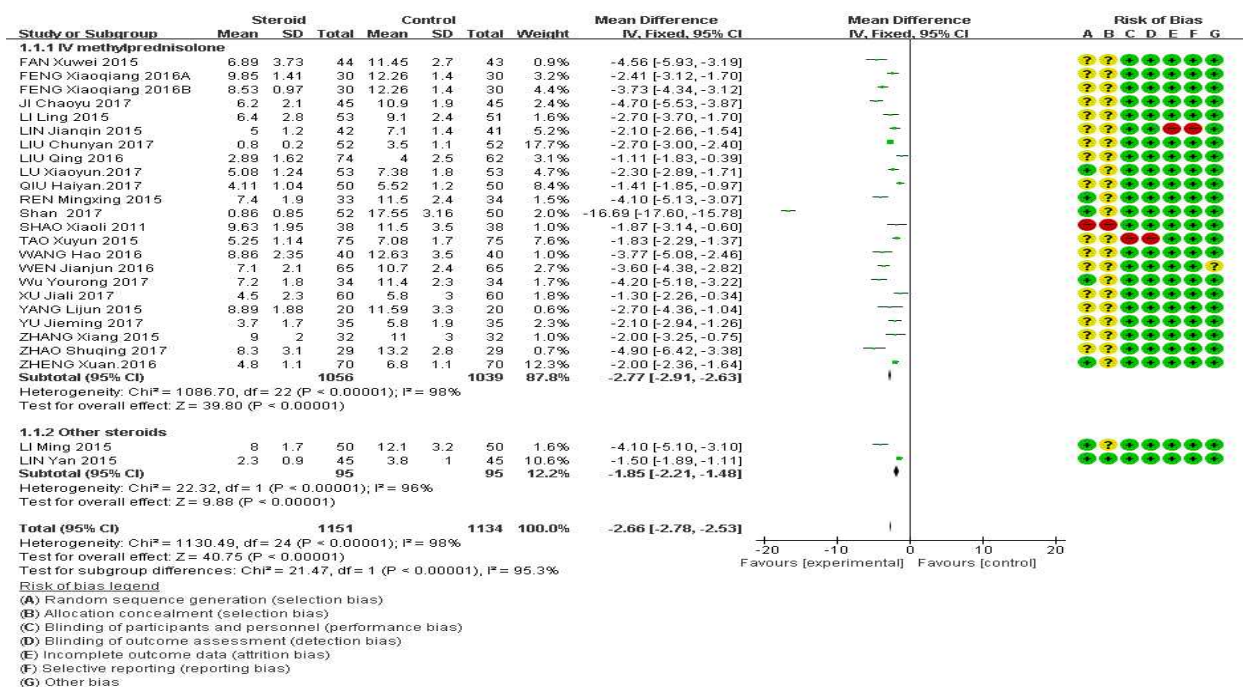
						48 hours of defervescence	
ZHANG Xiang 2015	China	2012- 2013	32: 5±2	32: 4±1	Intravenous infusion of urbason 1-2 mg/(kg/d) with nebulized budesonide, for 3~5d; If symptoms don't improve, oral administration of methylprednisolone was given for 3~5d.	Intravenous infusion of erythromycin 20~30 mg/kg/d, for 2 times, for 7days; followed by oral administration of Azithromycin 10mg/kg/d, (max. dose 0.5g/d), for 3d then stopped for 4d.	Fever duration, Hospital days
ZHAO Shuqing 2017	China	2013- 2015	29: 5.7±2.4	29: 5.3±2.5	Daily intravenous methylprednisolone 1.5-2.0mg/kg/d for 3days, then changed to 1mg/kg/d and tapering within 1 week	Intravenous azithromycin 10mg/kg/d on the 1st day, 5mg/kg/d from 2nd to 5th day, 5 days as a total treatment course.	Fever duration, Cough duration, CRP change
ZHENG Xuan.2016	China	2015- 2016	70: 5.5±0.5	70: 5.1±0.6	Intravenous infusion of methylprednisolone 2mg/kg/d, for 3d	intravenous infusion of azithromycin 10mg/kg/d in 3times/day	Fever duration, Cough duration, CRP change

2) 근거 요약표

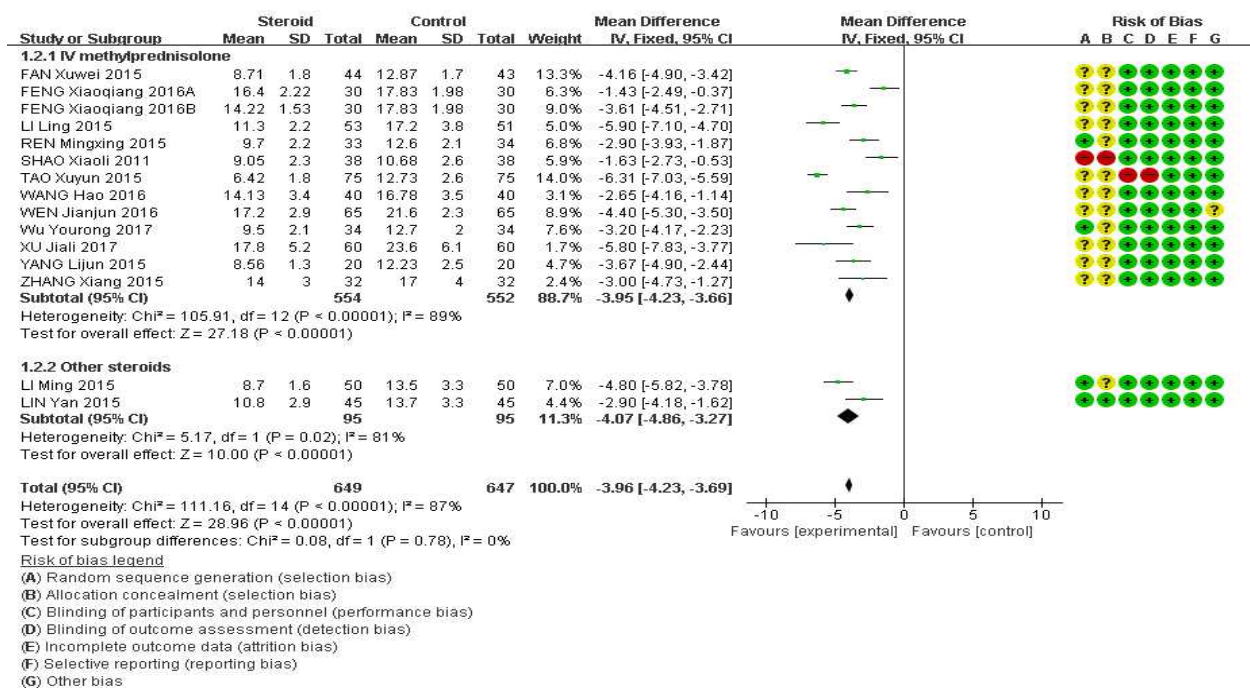
Certainty assessment							N _e of patients		Effect		Certainty	Importance
N _e of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Steroids for MRMP Treatment	placebo	Relative (95% CI)	Absolute (95% CI)		
Fever duration												
24	randomised trials	not serious	serious	not serious	not serious	none	1151	1134	-	MD 2.66 lower (2.78 lower to 2.53 lower)	 MODERATE	CRITICAL
Hospital Days												
15	randomised trials	not serious	serious	not serious	not serious	none	649	647	-	MD 3.96 lower (4.23 lower to 3.69 lower)	 MODERATE	IMPORTANT
CRP level after treatment												
14	randomised trials	not serious	serious	not serious	not serious	none	693	677	-	MD 5.97 lower (6.39 lower to 5.54 lower)	 MODERATE	IMPORTANT

3) The Cochrane Collaboration's tool for assessing risk of bias

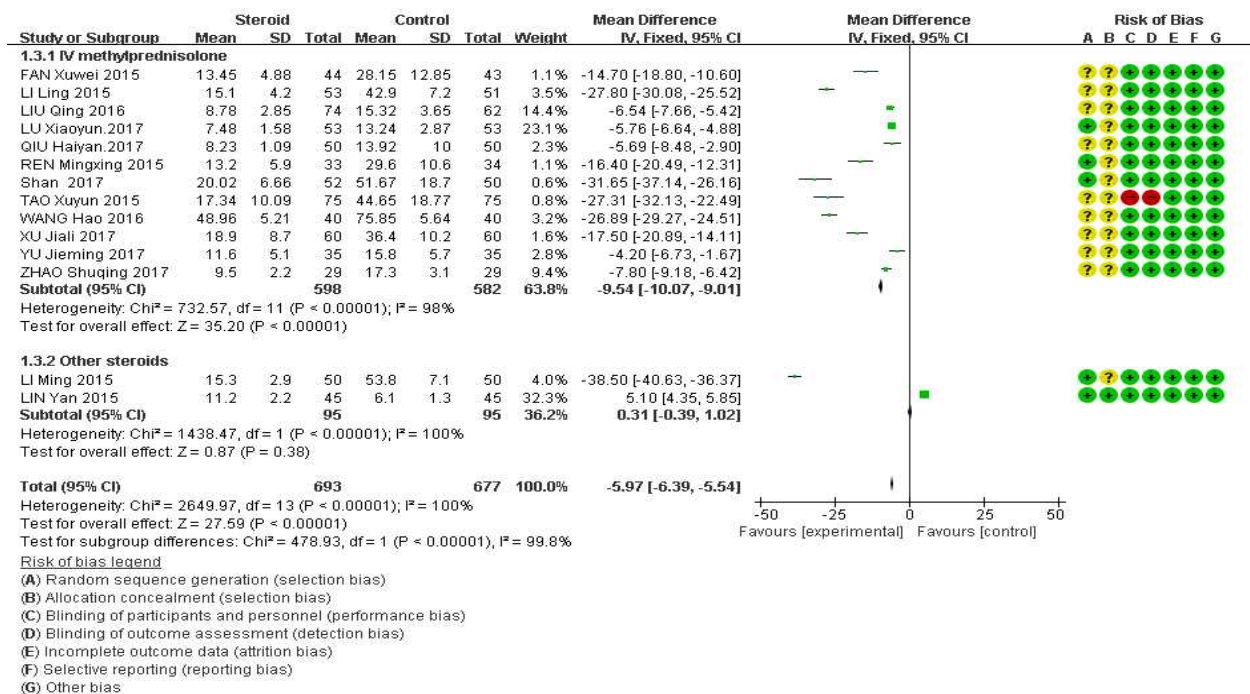
① 발열 기간



② 입원 기간



③ C-reactive protein 변화



핵심질문 4. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 정주용 면역글로불린 병용 치료는 마크로라이드 치료 대비 비교·효과적인가?


1) 근거 합성에 포함된 연구의 특징

Study	Study design	Characteristics				Intervention		Outcome
		Country	Period, year	Number of subjects: mean age of experimental group, y	Number of subjects: mean age of control group	Experimental group	Control group	
Shan LS, 2017	RCT	China	2013-2015	25(7.29±3.03, y)	52(7.36±2.33, y) 49(7.36±2.32)	Azithromycin 3 d + IVIG 3 d	Azithromycin 3 d	Fever duration, Improvement of chest x-ray

2) 근거 요약표

Certainty assessment							Impact	Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
fever duration									

Certainty assessment							Impact	Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
1	randomised trials	not serious	serious ^a	not serious	serious ^b	none	치료 시작 후 azythromycin + immunoglobulin 치료군(n=49)은 평균 3일을 보였으나 Azithromycin 단독 사용군(n=50)은 평균 7일의 발열기간을 보임.	⊖⊖⊖⊖ LOW	CRITICAL
CRP									
1	randomised trials	not serious	serious ^a	not serious	serious ^b	none	azythromycin + immunoglobulin 치료군(n=49)이 평균 38.4mg/L로 azythromycin 단독 치료군(n=50)의 51.6mg/L 보다 낮음.	⊖⊖⊖⊖ LOW	IMPORTANT
Chest X-ray									

Certainty assessment							Impact	Certainty	Importance
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
1	randomised trials	not serious	serious ^a	not serious	serious ^b	none	azythromycin + immunoglobulin in 치료군(n=49)의 폐렴 호전, 무기폐 호전, 흉막삼출액 호전 비율이 각각 71.4%, 67.9%, 72.2%로 azythromycin 단독 치료군(n=50)의 25.0%, 34.6%, 33.3%보다 좋은 결과를 보임.	 LOW	IMPORTANT

CI: Confidence interval

Explanations

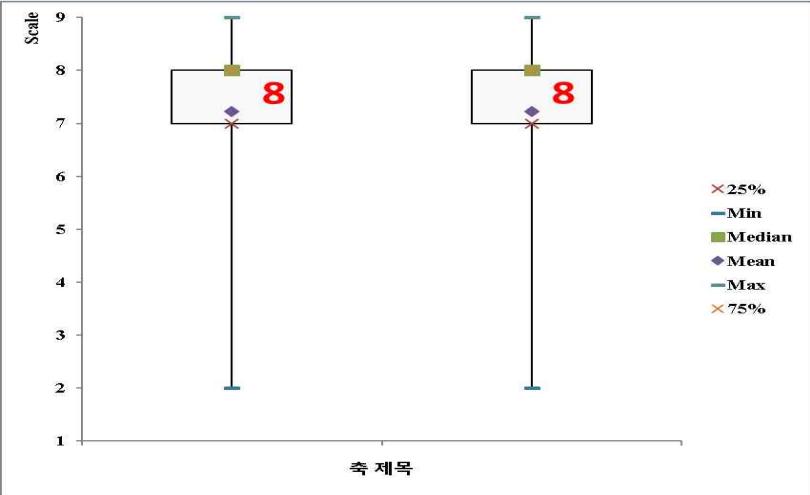
a. single study

b. too small for optimal information size

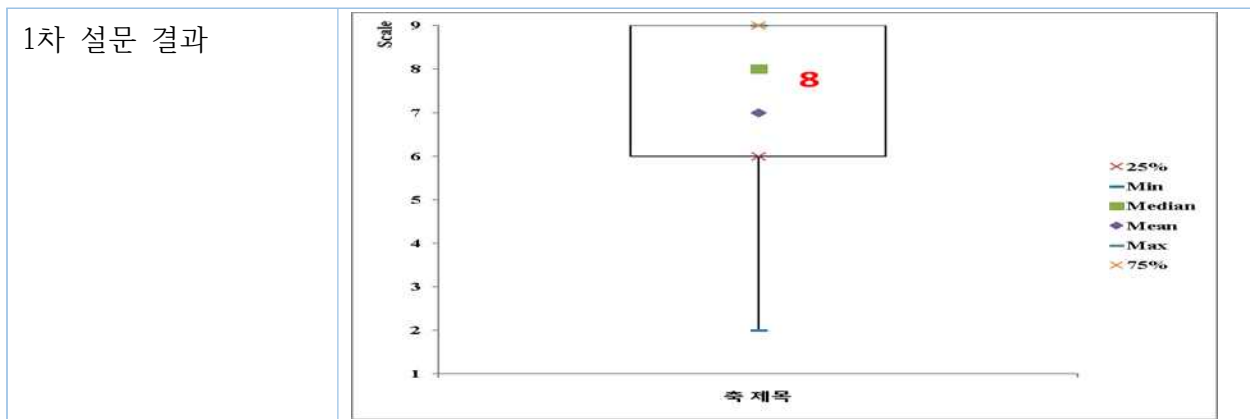
6. Rand 기법 적용 합의안 도출

1) 1차 라운드 시행 및 결과(2018년 8월 27일)

- 총 9명의 내·외부 전문가를 대상으로 핵심질문, 권고문과 권고등급, 근거 합성 결과, 근거표를 포함한 설문 조사를 수행하였고, 수행 결과 핵심 질문 1-1), 1-2), 2)에 대해 합의에 도달하지 못하였다.

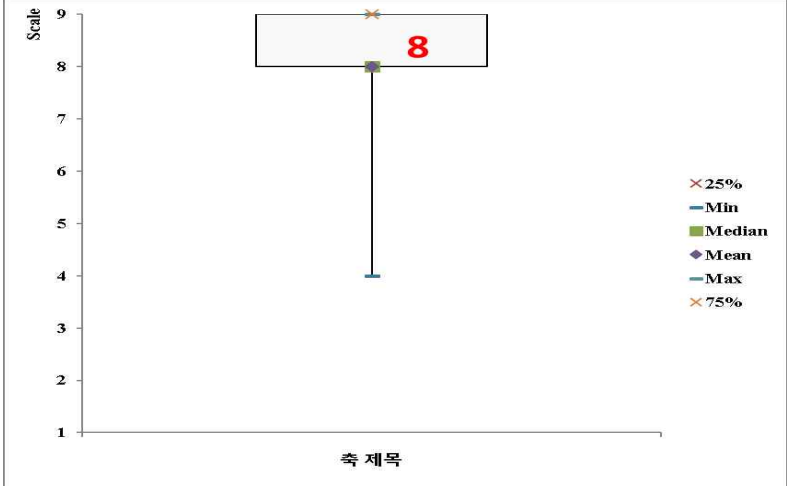
핵심질문	권고문	권고등급	근거수준
1. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 비마크로라이드 항균제(테트라사이클린제, 퀴놀론제) 치료는 마크로라이드 치료 대비 비교·효과적인가?	1-1. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 마크로라이드 계열의 항균제 치료에도 임상 경과와 호전이 없을 때, 비마크로라이드 제제로 변경 또는 추가하여 치료할 것을 권고한다	B	Moderate
	1-2. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 테트라사이클린제 또는 퀴놀론제 중 치료의 이득과 위해를 고려하여 약제를 선택할 것을 권고한다	B	Moderate
1차 설문 결과			

핵심질문	권고문	권고등급	근거수준
2. 마크로라이드 불응성 중증 소아 마이코플라즈마 폐렴에서 코르티코스테로이드제 병용 치료는 마크로라이드 치료 대비 비교·효과적인가?	마이코플라즈마 폐렴에서 마크로라이드 계열의 항균제 치료에도 임상 경과와 호전이 없을 때 항균제 치료를 유지하면서, 스테로이드 병용 치료를 권고한다	A	High



핵심질문	권고문	권고등 급	근거수준
3. 마크로라이드 불응성 중증 소아 마이코플라스마 폐렴에서 경구용 코르티코스테로이드제 치료는 정주용 코르티코스테로이드제 치료 대비 비교·효과적인가?	메틸프레드니솔론 정주와 프레드니솔론 경구 치료 사이에 효과 차이는 없다. 스테로이드 사용의 이득과 위해, 환자의 전신 상태를 고려하여 약제를 선택할 것을 권고한다	B	Moderate
1차 설문 결과			

핵심질문	권고문	권고등 급	근거수 준
4. 마크로라이드 불응성 중증 소아 마이코플라스마 폐렴에	마크로라이드 불응성 소아 마이코플라스마 폐렴에서 마크로라이드 단독치료보다	I	Low

서 정주용 면역글로불린 병용 치료는 마크로라이드 치료 대비 비교·효과적인가?	면역글로불린 병용 치료를 권고할 근거가 부족하다		
1차 설문 결과			

2) 2차 라운드 실행 결과(2018년 10월 5일)

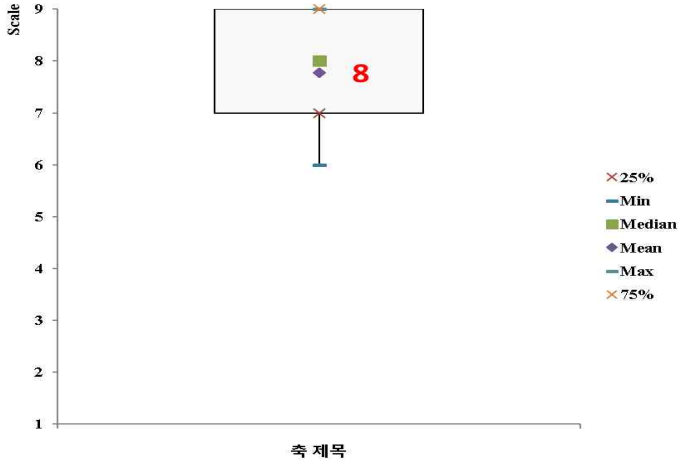
- 합의에 도달하지 못한 3개의 핵심 질문에 대해 대면 회의를 통한 2차 라운드를 진행하였고, 아래의 주용 쟁점 사항의 변경을 통해 권고안 합의에 도달하였다.

1차 라운드 주요 쟁점 사항		2차 라운드 결과
1) 코르티코스테로이드의 권고 등급과 근거수준에 대한 조정이 필요함 - 근거 합성에 포함된 문헌들에서 심각한 selection bias가 발생하고 있으며, 이를 고려할 때 권고 등급과 근거 수준을 하향해야 함		기존의 권고 등급 B, 근거 수준 high를 근거 수준 moderate로 수정하는데 합의
2) 코르티코스테로이드의 근거수준에 대한 조정이 필요함 - 근거 합성에 사용된 논문들 간의 이질성이 높음		근거 합성에 포함된 문헌의 수가 많고, 대상자 수가 커서 발생한 이질성으로 보이며, 포함된 모든 문헌들의 방향성은 일관적으로 근거 수준의 하향은 불필요함
3) 테트라사이클린제가 플루오르퀴놀론제		결과를 반영하기에는 문헌과 근거가 부족

대비 우월함		하며, 다양한 요인들(선호도, 장애요인, 의료비용, 안전성)을 고려하였을 때 우성 순위를 두지 않는 것으로 합의
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핵심질문	권고문	권고등급	근거수준
1. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 비마크로라이드 항균제(테트라사이클린제, 퀴놀론제) 치료는 마크로라이드 치료 대비 비교·효과적인가?	1-1. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 마크로라이드 계열의 항균제 치료에도 임상 경과의 호전이 없을 때, 비마크로라이드 제제로 변경 또는 추가하여 치료할 것을 권고한다	B	Moderate
	1-2. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 테트라사이클린제 또는 퀴놀론제 중 치료의 이득과 위험을 고려하여 약제를 선택할 것을 권고한다	B	Moderate
2차 설문 결과			

핵심질문	권고문	권고등급	근거수준
2. 소아 마크로라이드 불응성 중증 마이코플라즈마 폐	소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴에서 마크로라이드 계열의	B	Moderate

렴에서 코르티코스테로이드 제 병용 치료는 마크로라이드 치료 대비 비교·효과적인가?	항균제 치료에도 임상 경과 호전이 없을 때 항균제 치료를 유지하면서, 스테로이드 병용 치료를 권고한다																
2차 설문 결과	<div><p>Scale</p><p>축 제목</p><p>× 25% — Min ■ Median ◆ Mean — Max × 75%</p><table><caption>Box Plot Data</caption><thead><tr><th>Statistic</th><th>Value</th></tr></thead><tbody><tr><td>Min</td><td>6</td></tr><tr><td>Q1 (25%)</td><td>7</td></tr><tr><td>Median</td><td>8</td></tr><tr><td>Mean</td><td>~7.8</td></tr><tr><td>Q3 (75%)</td><td>9</td></tr><tr><td>Max</td><td>9</td></tr></tbody></table></div>			Statistic	Value	Min	6	Q1 (25%)	7	Median	8	Mean	~7.8	Q3 (75%)	9	Max	9
Statistic	Value																
Min	6																
Q1 (25%)	7																
Median	8																
Mean	~7.8																
Q3 (75%)	9																
Max	9																

7. 내·외부 검토 과정의 문서화

성함, 역할	검토 의견	반영 결과
김기환, 내부 검토	지침의 치료가 좀더 중증으로 가는것을 미리 막을 수 있는 선제적인 치료로 적용되기를 바란다면 '불응'으로 지침이 적용되어야 할 것이고 지침의 치료가 아직 충분한 근거가 기반이 되지 못하고 위험이 따를 수 있는 치료가 권고되고 있다면 좀더 엄격하게 '불응 중증'이 대상이 되어야 할 것으로 생각됩니다. 이 지침의 자료가 아직 더 근거가 마련되어야 할 권고사항을 포함하고 있기에 이 지침은 '불응 중증' 을 대상으로 하기를 바랍니다.	지침의 제목을 “소아 마크로라이드 불응성 중증 마이코플라즈마 폐렴”으로 명시하였고, 중증에 한해 권고함을 다시 한번 강조하였습니다.
김수영, 외부 검토, 지침 개발 방법론	1) 요약에는 권고문이 들어가면 좋겠습니다. 2) 대상군에 1차의료기관도 가능한지, 예들 들어 면역글로블린 치료가 가능한지 고려가 필요하겠습니다. 3) 근거수준과 권고등급의 의미에 대한 내용이 있으면 좋겠습니다. 4) PICO에서 치료 결과에서 위해에 대한 내용이 없어서 오해가 있을 수 있습니다.	1) 요약에 권고문 요약을 추가하였고, 적용성과 수용성에 대한 내용을 보강하였습니다. 3) 근거수준과 권고 등급에 대한 내용을 VI. 지침 개발 과정에 추가하였습니다. 4) V. 권고에 대한 지지 근거 및 정보 장의 핵심질문 중 치료결과 부분에 “위해”에 대한 기술을 추가하였습니다.
원성훈, 외부 검토, 소아 정형외 과학	“하지에서는 아킬레스건, 상지에서는 어깨 및 손의 건염 및 건파열과 같은” 기술을 추가하는 것이 좋겠습니다.	II. 서론과 배경장에 추가 기술하였습니다.
심정연, 내부 검토	중증 폐렴으로 국한하면 지침이 정말 일부	이차항균제와 코르티코스테

토	환자들에게만 적용 가능할 것으로 보여 권고안 대상을 중등증으로 넓히는게 좋지 않을까 합니다. (2018.12.10) 중증으로 제한하는것에 동의합니다.(2018.12.15)	로이드제의 오남용 방지를 위해 중증으로 제한하고자 합니다.
이용주, 내부 검토	제목과 서론 그리고 핵심질문에만 나오는 "중증"은 기술에서 빼는 것이 어떨까 합니다. "마크로라이드 불응성" 이라는 말 자체에 어느 정도 "통상적인 치료가 잘되지 않는" 의 개념이 포함한다고 생각됩니다.(2018.12.8) 중증으로 제한하는것에 동의합니다.(2018.12.15)	이차항균제와 코르티코스테로이드제의 오남용 방지를 위해 중증으로 제한하고자 합니다.
정우진, 외부 검토, 소아 치과 전문의	잘 되어있는 지침이라 생각이 되고 특별한 의견은 없습니다	감사합니다
김환수, 내부 검토	제목에서 중증을 빼는 것이 좋을 것 같습니다.(2018.12.11) 중증으로 제한하는것에 동의합니다.(2018.12.15)	이차항균제와 코르티코스테로이드제의 오남용 방지를 위해 중증으로 제한하고자 합니다.
한만용, 내부 검토	1) 한글로 한다면 Fig 를 그림으로 바꾸는 것은 어떨지요? 또한 그림 설명문도 2) 95% CI 표기를 - 로 하였던 데 ~ 으로 하는 것은 어떨지요?	의견을 반영해서 수정하였습니다.
박수은, 내부 검토	1) 고려 사항: 플루오르퀴놀론제와 테트라 사이클린제 사용의 이득과 위해 - 독시와 미노의 사용을 같은 수준으로 권고할 것인지 아니면 독시를 권고할 것 인지 논의가 필요하겠습니다. 이 지침에서는 둘의 권고 수준이 동일하게 느껴지는데	합니다. 검토 의견에 대한 개발위원회의 논의 결과는 1) 미노사이클린에 대한 이상반응이 다른 테트라사이클린제에 비해 높다는 보고가 있지만 우리가 근거 합성 결과에서는 이러한 결론에 도달할 수 없었습니다.

	<p>미노의 경우 독시에 비하여 다른 약물 이상 반응 예를 들어 DRESS 등과의 관련이 있고 치아 착색의 정도도 테트라사이클린계 항균제가 동일하지 않아 항균제마다 차이가 있는 것으로 알려져 있습니다.</p> <p>- 결핵의 유병률이 높은 우리나라에서 퀴놀론계 항균제의 사용은 항상 주의가 필요합니다. 가끔 MP와 폐결핵의 영상 소견이 유사하여 감별이 어려울 때가 있는데 이때 퀴놀론의 단독 사용은 결핵 진단을 지연시킨다는 연구 결과가 있습니다. 따라서 연령 금기에 따른 사용 고려 외 결핵과 관련된 내용도 언급이 있으면 좋겠습니다.</p> <p>2) 이 지침서의 scope에 포함되어 있지 않지만 마크로라이드 불응성 MP의 정의를 제시하여야 할 필요가 있을 것 같습니다. 그리고 중증 폐렴의 정의에 대하여 처음에 기술하는 것이 필요하겠습니다. 정의에 대한 기준에 있어야 사용자 임의 해석에 의한 지침의 적용을 예방하고 사용자가 균일한 진료 기준을 가질 수 있을 것 같습니다.</p>	<p>최근의 체계적 문헌 고찰에서는 미노사이클린과 독시사이클린 사이에 효과와 안전성에서 차이가 없으니 대체할 수 있다는 내용도 있습니다. (Open Forum Infect Dis. 2015 Dec; 2(4) ofv178.) 따라서 독시사이클린을 우선적으로 권할만한 근거는 현재까지는 부족합니다.</p> <p>2) “특히 결핵의 유병률이 높은 우리나라의 경우, 무분별한 퀴놀론의 사용은 결핵의 진단을 지연시킬 가능성이 있으므로 이번 지침에서 제안하는 퀴놀론의 사용은 불응성 중증 마이코플라즈마 폐렴으로 진단된 경우에만 적용되어야 한다.” 내용을 추가하였습니다.</p>
원성호, 외부 검토	<p>잘 만들어진 지침으로 특별한 의견은 없습니다. 다만, 일반인이 이해하기에는 의학 용어가 어렵습니다.</p>	<p>감사합니다. 최대한 영어 표기를 줄이고 한글로 기술하였으며, 이해를 돕기 위한 주석에 충실하겠습니다.</p>

8. 참고 문헌

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