Update of *Mycoplasma genitalium*

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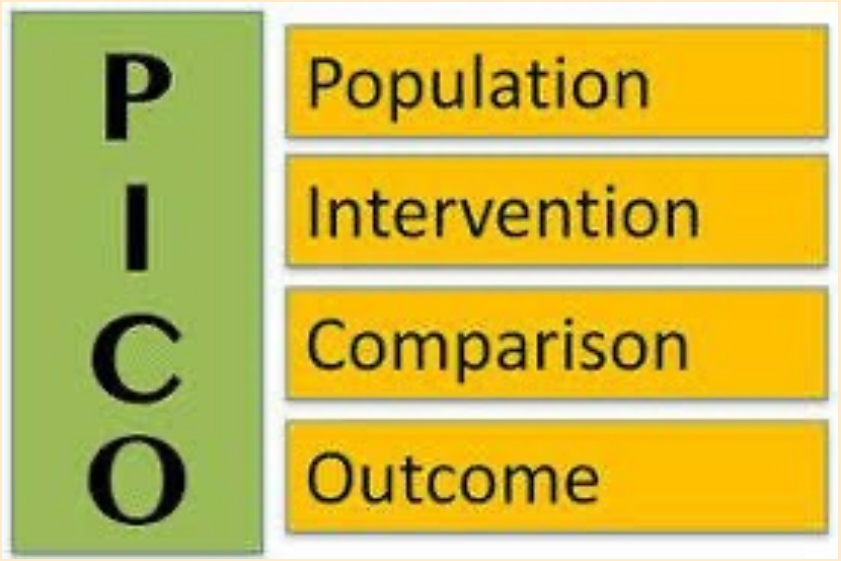
SINCE 1999

핵심질문(PICO) 1.

- 최근 azithromycin의 내성균의 급속한 증가를 고려할 때, 치료약제 선택을 위한 *Mycoplasma genitalium*에 대한 내성 검사가 필요한가?



CDC Update, 2021

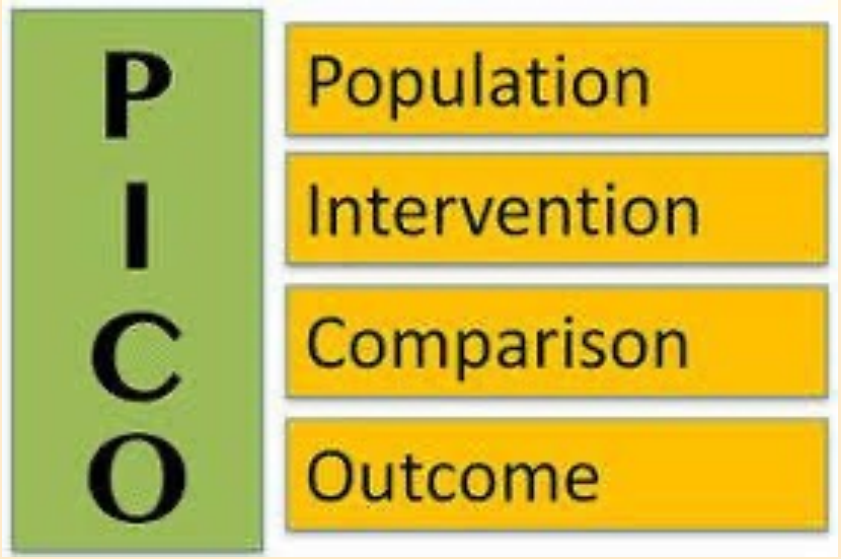
2015	2021
• 언급없음	• Males with recurrent urethritis and females with recurrent cervicitis should be tested for *M. genitalium* using a Food and Drug Administration-approved nucleic acid amplification test. Testing should be considered with PID. Asymptomatic screening is not recommended. • **Resistance testing should be performed to guide therapy, due to rapidly increasing azithromycin resistance.**

근거표 (Table of Evidence)

CITATION	STUDY DESIGN	STUDY POP. TYPE/SETTING	EXPOSURE/ INTERVENTION	OUTCOME MEASURES	REPORTED FINDINGS	DESIGN ANALYSIS QUALITY/BIASES	SUBJECTIVE QUALITY RATING
Bachmann LH, Kirkcaldy RD, Geisler WM, et al. Prevalence of Mycoplasma genitalium Infection, Antimicrobial Resistance Mutations, and Symptom Resolution Following Treatment of Urethritis. ISSTDR, 2019.	Cohort June 2017-July 2018	N=914 men presenting with urethritis symptoms to 6 US STD Clinics	Standard of care at each clinic site. All but 1 used >=2 PMN/HPF cutoff	Aptima ASR assay PCR and sequencing for MRM and parC and gyrA	Overall prevalence of MG = 28.7% MRM prevalence = 62.2% (163/262); little difference between males & females (66.7% vs. 61.9%) parC prevalence (all mutations) = 11.4% (30/262); higher in males than in females (21.4% vs. 9.8%) S83I = ~2% parC and MRM = 8.0% (21/262); higher in males than in females 19.0% vs. 6.0%	Strengths: Multiple geographic areas in US, resistance testing Limitations: Various methods for quantitating PMNs (methylene blue vs. Gram stain; cutoff for urethritis).	
Moi H, Haugstvedt A, Jensen JS. Spontaneous Regression of Untreatable *Mycoplasma genitalium* Urethritis. *Acta Derm Venereol*. 2015;95(6):732-3.	Case report	N=1 with MG/CT co-infection.	Doxycycline (100mg bid x 7d) followed by azithromycin 500mg plus 250mg on days 2-5) Moxifloxacin 400mg x 7d Prolonged doxycycline (100mg bid x 15d) Condom use and return after 6m after treatment failures Moxifloxacin (400mg x 10d)	TOC at 6 weeks post-azithromycin TOC 4 weeks post-moxifloxacin TOC at 6 weeks post-moxifloxacin TOC 5 mo. later	MG persisted at 6 weeks, although asymptomatic MG persisted after moxifloxacin for 4 weeks; also, subsequent NAAT 2 weeks later still MG+ 5 mo. visit had moderate urethritis and still MG+ 11 mo. visit no urethritis but MG+ 14mo visit MG+ 3 yrs. 11 mo. after first test, negative for MG (denied any further antibiotics after last moxifloxacin)	Strengths: careful follow-up over a long period of time. Accurate testing. Limitations: single case report	Good.

핵심질문(PICO) 2.

- 내성 검사가 가능하여 macrolide에 대한 감수성이 확인될 때, doxycycline 100mg bid for 7 days + azithromycin 1g once + azithromycin 500mg qd for 3 days의 two-stage therapy가 azithromycin 단독치료보다 효과적인가?



CDC Update, 2021

2015

- The 1-g single dose of azithromycin was significantly more effective against *M. genitalium* than doxycycline in two randomized urethritis treatment trials and is preferred over doxycycline.
- A longer course of azithromycin (an initial 500-mg dose followed by 250 mg daily for 4 days) might be marginally superior to the single dose regimen.

2021

Recommended Regimens if *M. genitalium* Resistance Testing Is Available

- **If macrolide sensitive: Doxycycline 100 mg orally 2 times/day for 7 days, followed by azithromycin 1 g orally initial dose, followed by 500 mg orally daily for 3 additional days (2.5 g total)**
- **If macrolide resistant: Doxycycline 100 mg orally 2 times/day for 7 days followed by moxifloxacin 400 mg orally once daily for 7 days**

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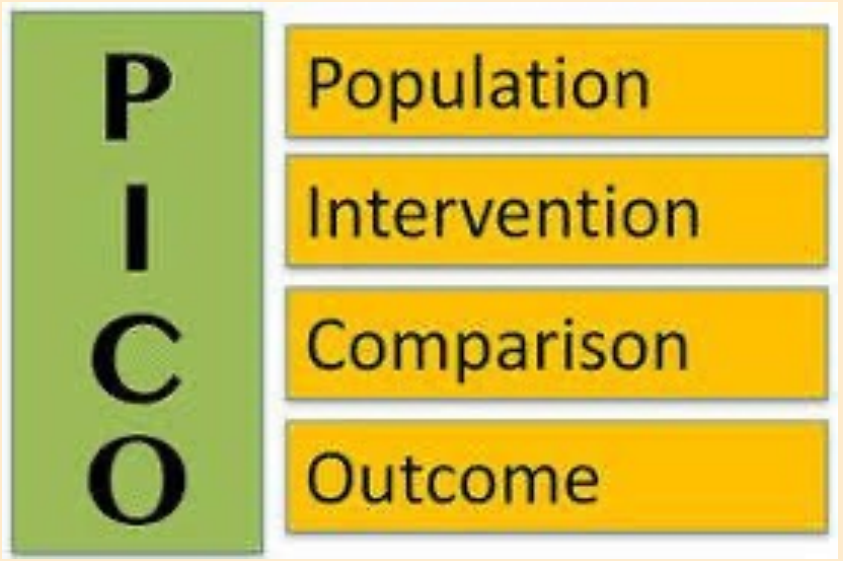
핵심질문(PICO) 3.

- 내성 검사가 가능하지 않을 때, doxycycline 100mg bid for 7 days + moxifloxacin 400mg qd for 7 days 요법이 macrolide 또는 moxifloxacin 단독치료보다 효과적인가?



CDC Update, 2021

2015

- Moxifloxacin (400 mg daily x 7, 10 or 14 days) has been successfully used to treat *M. genitalium* in men and women with previous treatment failures, with cure rates of 100% in initial reports. However, moxifloxacin has been used in only a few cases, and the drug has not been tested in clinical trials. Although generally considered effective, studies in Japan, Australia, and the United States have reported moxifloxacin treatment failures after the 7 day regimen.

2021

Recommended Regimen if *M. genitalium* Resistance Testing Is Not Available

- **If *M. genitalium* is detected by an FDA-cleared NAAT: Doxycycline 100 mg orally 2 times/day for 7 days, followed by moxifloxacin 400 mg orally once daily for 7 days**

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