Literature Review

National STD Curriculum Podcast

Does EPT Work for Trichomonas?

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Season 4, Episode 3

This episode discusses three articles about the effectiveness of expedited partner therapy (EPT) for trichomoniasis in women and female adolescents.

Topics:

- Trichomoniasis
- Trich
- EPT
- STIs
- STDs

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No Disclosures

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Transcript

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introduction**[00:00] Introduction**

Hello everyone. My name is Meena Ramchandani. I'm an infectious disease physician at the University of Washington in Seattle. This podcast is dedicated to an STD [sexually transmitted disease] literature review for health care professionals who are interested in remaining up-to-date on the diagnosis, management, and prevention of STDs.

background**[00:21] Background**

A question that came up among some providers was about the role of EPT for trichomoniasis. The 2021 CDC STI Treatment Guidelines—they advise that while existing data indicate that EPT might have a role for trichomoniasis, no partner management intervention has been reported to be more effective than any other in reducing trichomoniasis reinfection rates. I wanted to review some of the published research on this topic in this episode. EPT, or expedited partner therapy, is a strategy for treating sex partners of persons diagnosed with gonorrhea or chlamydia infection when the partner is just unable or unlikely to seek timely treatment. But what about *Trichomonas vaginalis*? Does EPT work to reduce reinfection of this organism compared to other partner management interventions? There are many states where EPT is permissible by law, primarily for gonorrhea and chlamydia infection, and there are some states where EPT is also recommended for trichomoniasis.

If you're interested in learning more about EPT, please refer to our episode published in March 2022. And in April 2022, we also published an episode on treatment options for trichomoniasis, which I also encourage you to listen to.

paper-1**[01:37] Paper #1**

Kissinger P, Schmidt N, Mohammed H, et al. Patient-delivered partner treatment for *Trichomonas vaginalis* infection: A randomized controlled trial. Sex Transm Dis. 2006 Jul;33(7):445-50. **[PubMed Abstract]**

This first article for review was published in *Sexually Transmitted Diseases* in July of 2006 by Dr. Kissinger and colleagues. It is titled "Patient-delivered partner treatment for *Trichomonas vaginalis* infection: A randomized controlled trial." This study evaluated patient-delivered partner treatment for women with *Trichomonas vaginalis*attending a family planning clinic. Patient-delivered partner treatment is one form of EPT where antimicrobial treatment for partners is provided to the index patient, who is then instructed to deliver the medication to partners.

1. The study was conducted in New Orleans at a Women's Health Clinic from 2001-2004. Women enrolled in the study had a culture-confirmed diagnosis of *Trichomonas vaginalis* infection, and from here on out, I'm going to say *T. vaginalis* for short.
2. Women were randomized to one of three study arms for partner treatment: the standard partner referral, where women were instructed to tell partners they need to go into a clinic for evaluation and treatment; booklet-enhanced partner referral, where women were given a booklet with tear-out cards to give to partners with education and treatment guidelines on *T. vaginalis* infection; or patient-delivered partner treatment, and this is where women were given packages containing 2 grams of metronidazole, and they could give this to up to four identified sex partners. The packages had instructions and education about the diagnosis as well as the medication.
3. The study enrolled 463 women; 99% were Black or African American, 87% had high school education or higher, and the mean age was 26. The majority (or 87%) of participants reported one partner in the previous two months, and 63% of women had symptoms.
4. Ninety-eight percent of women were treated with a 2-gram single dose of metronidazole, and the rest were treated with a 7-day course of antibiotics; 412 (or 89%) of the women returned for a follow-up visit.
5. Now, what they found is that women in the patient-delivered partner treatment group were more likely to have seen their partners, have checked in to see if partners were treated, and reported the partners took the medicine, and that was compared to the booklet-enhanced partner referral group.
6. Women in the patient-delivered partner treatment group were somewhat more likely to report their partners took the medicine compared to those in the standard partner referral group, but this was not statistically significant and had a *P* value of 0.09.
7. Of the 376 women who were tested at follow-up, 8% were positive for *T. vaginalis,* and the recurrence rates were similar among all three study arms.
8. The authors found that the cost per partner treated for the patient-delivered partner treatment group was lower than that of other interventions, but this was on the assumption that none of the partners in

the patient-delivered partner treatment group received clinical care.

So, in summary, the patient-delivered partner treatment group was not associated with more partners being treated or a lower recurrence rate of *T. vaginalis* infection compared to the standard partner referral. But, patient-delivered partner treatment *is* an option for partner treatment and might be more cost-effective overall than other strategies.

paper-2**[04:52] Paper #2**

Schwebke JR, Desmond RA. A randomized controlled trial of partner notification methods for prevention of trichomoniasis in women. Sex Transm Dis. 2010 Jun;37(6):392-6. **[PubMed Abstract]**

The next article to discuss was published in *Sexually Transmitted Diseases* in June of 2010 by Dr. Schwebke and colleagues. This article is titled “A randomized controlled trial of partner notification methods for prevention of trichomoniasis in women.”

1. This study was conducted in Birmingham, Alabama, where 484 women were enrolled from 2003 to 2008. These women were diagnosed with *T. vaginalis* infection and treated with metronidazole 2 grams orally as a single dose.
2. Women in this study were randomized to three groups: self-referral of partners, partner-delivered therapy, where the index patient was provided with metronidazole for up to 4 partners in the past 30 days, or a public health disease intervention specialist (also known as DIS) who located partners and delivered medication in the field.
3. A test-of-cure was done pretty early on, at 5-9 days after treatment, and then follow-up visits were conducted at 1 and 3 months after the test-of-cure visit. Now, while the test-of-cure is soon after treatment and would make me concerned about potential false positives, in this study, the diagnosis of *T. Vaginalis* infection was actually made by a vaginal wet preparation positive for motile trichomonads or a positive culture. So, unlikely to be a false-positive result.
4. At the 1- and 3-month follow-up visits, there was no significant difference in repeat infection rates when partner-delivered therapy or DIS-assisted partner treatment were compared to the self-referral of partners from the index patient.
5. When partner-delivered therapy was compared to DIS partner notification or DIS and self-referral of partners combined, at the 1-month follow-up, the partner-delivered therapy group had a lower repeat infection rate. What the authors found was that the reinfection rates were 6% in the partner-delivered therapy group, 15% in the DIS intervention group, and 13% in the combined partner self-referral or DIS intervention group.
6. Although these differences were seen at the 1-month follow-up, at 3 months, the authors found that reinfection rates were not significantly different among the three groups. The overall reinfection incidence rate was 7% at 3 months. The study did have high loss to follow-up, with 40% of women completing the entire study.
7. In the partner-delivered therapy group, 80% of women said they delivered treatment to their male partner, and it was likely 90% of these men took the medication.

So, this randomized control trial showed that reinfection rates in the partner-delivered therapy were *not* lower than in the partner referral arm, which is the usual standard of care. Partner-delivered therapy was not associated with any known serious adverse events and had a high level of acceptance and adherence with delivery of medication to the male partners per self-report of the female index patient. So, partner-delivered therapy may be considered for women with *T. vaginalis,* but we don’t have evidence that this is a superior modality for partner treatment or decreases reinfection rates compared to a standard partner referral.

paper-3**[08:06] Paper #3**

Gannon-Loew KE, Holland-Hall C, Ebersole AM, Alexy E, Jackson K, Bonny AE. Expedited partner therapy in

female adolescents: A study of acceptance and the impact on reinfection rates. Sex Transm Dis. 2021 Nov 1;48(11):828-833. **[PubMed Abstract]**

The third article to discuss was also published in *Sexually Transmitted Diseases*, and this was published by Dr. Gannon-Loew and colleagues in November of 2021. It is titled “Expedited partner therapy in female adolescents: A study of acceptance and the impact on reinfection rates.” In this study, they evaluated EPT acceptance and reinfection rates of *Chlamydia Trachomatis* and *T. Vaginalis* in female adolescents and young adults before and after the legalization of EPT in Ohio that occurred in 2016. And we’re going to focus on their results for *T. Vaginalis* infection for this episode.

1. The authors did the study at the Adolescent Medicine Clinic at Nationwide Children’s Hospital. This is a large, urban, academic clinic that provides care to adolescents and young adults, ages 13 to 22 years.
2. The pre-EPT cohort provided baseline data on STI reinfection rates before EPT implementation from 2012 to 2015. The post-EPT cohort was after EPT legalization in 2016. A diagnosis of *T. Vaginalis* infection was made by the use of a positive NAAT (or nucleic acid amplification test) or microscopic evaluation of vaginal fluid in this study.
3. After EPT legalization, a protocol was developed to provide a prescription for partners of patients diagnosed with *T. Vaginalis.*
4. In the pre-EPT cohort, 23% of patients were reinfected with *T. Vaginalis* compared to 14% in the post-EPT cohort, although this difference was not statistically significant, likely due to low numbers of individuals who returned for retesting overall.
5. Among the post-EPT patients, 71% of patients were offered EPT but only 25% accepted this method of partner treatment. Of the patients who accepted EPT, 75% (or 18 out of 24 patients) returned for a test of reinfection, and the reinfection rate was 6% among patients who accepted EPT compared to 18% among patients who did *not* accept EPT, but this difference was not statistically significant, and the *P* value was 0.69.

Given the high prevalence of STIs in adolescents and young adults, I thought this was a great study to include in this episode. Overall, the authors found that EPT acceptance for *T. Vaginalis* infection was low among adolescents and young adults, with only 25% who were offered EPT accepting EPT. While this could be for several reasons, the authors discuss how prescription (instead of actual medication) was provided for partner treatment, due to limited resources. And, this is important to think about: How EPT can be implemented in real-world settings and what is the best method for implementation?

summary**[10:58] Summary**

Htaik K, Fairley CK, Bilardi JE, Chow EPF, Ong JJ, Chen MY. Evaluation of the online partner messaging service for sexually transmitted infections let them know. Sex Transm Dis. 2022 Jan 1;49(1):12-14. **[PubMed Abstract]**

In summary, no partner management intervention has been demonstrated to be superior in reducing reinfection rates for trichomoniasis in randomized control trials. EPT, which is a wonderful strategy to get partners treated, was shown to have equivocal results in these studies compared to standard partner referral. The 2021 STI Treatment Guidelines do note that while no definitive data exist to guide treatment for partners of persons with persistent or recurrent trichomoniasis, partners might benefit from being evaluated and receiving treatment. The studies we discussed in this episode are a bit older now and conducted prior to the 7-day course of metronidazole treatment that is *now* currently recommended.

I think if a patient tells me that the partner is unable or unlikely to seek timely treatment, then I would consider EPT for trichomoniasis as reinfection rates are high and the consequences for untreated infection can be severe, but this really can be determined on a case-by-case basis.

There are some nice patient guides available online through different departments of public health, many of which focus on the use of EPT for female partners and heterosexual male sex partners, as this is where we have the most data. If you're interested in learning more, I also suggest an article published in *Sexually Transmitted Diseases* by Dr. Htaik and colleagues in January of 2022. This was evaluating an online partner messaging service for STIs to help improve partner notification. I look forward to seeing more studies on this topic in the future. To conclude, I'd like to summarize some key points from this session:

1. Patient-delivered partner treatment for women with *T. vaginalis* infection is not associated with more partners being treated or a lower recurrence rate of infection compared to standard partner referral.
2. Patient-delivered partner treatment may have high level of acceptance and adherence with delivery of medication to partners of adult women.
3. EPT using prescriptions for *T. Vaginalis* infection was associated with a low rate of acceptance, and reinfection rates did not differ between those who accepted and did not accept EPT in adolescents and young adults.
4. While no definitive data exist to guide treatment for partners of persons with persistent or recurrent trichomoniasis, partner management is important, and receiving treatment either through prescription or patient-delivered medication, especially if a patient says their partner is unable or unlikely to seek timely treatment, can be one way to prevent reinfection.

credits**[13:34] Credits**

This podcast is brought to you by the National STD Curriculum, the University of Washington STD Prevention Training Center, and is funded by the Centers for Disease Control and Prevention.

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