Public Health England

BASHH

Position Statement on Doxycycline as Post-Exposure Prophylaxis for Sexually Transmitted Infections

Key Points

- Doxycycline Post Exposure Prophylaxis for sexually transmitted infections (STIs) is not endorsed by BASHH or Public Health England.
- Any potential benefits will be outweighed by the considerable potential to select resistance in STI pathogens and other bacterial species.
- Further studies are required to measure the wider impact of prophylactic doxycycline on antimicrobial resistance (AMR) at an individual and population level.
- We recommend the use of antibiotics as prescribed by a healthcare professional and as indicated by the results of a suitable diagnostic test.

A report from CROI 2017 stated that Post-Exposure Prophylaxis (PEP) with Doxycycline halved the rates of bacterial Sexually Transmitted Infections (STIs) in men who have sex with men (MSM) in an extension of the French IPERGAY trial. Many of the online companies selling HIV Pre-exposure Prophylaxis (PrEP) in the form of Tenofovir Disoproxil Fumarate 300mg / Emtricitabine 200mg are now making Doxycycline available to UK buyers. Here we provide a summary of the data presented in abstract 91LB at CROI 2017 and a statement on potential implications.

ON DEMAND POST EXPOSURE PROPHYLAXIS WITH DOXYCYCLINE FOR MSM ENROLLED IN A PREP TRIAL - Jean-Michel Molina et al CROI Seattle, Washington Feb13-16, 2017

Jean-Michel Molina's study was the first randomized open-label trial of the efficacy and safety of a novel antibiotic prophylaxis strategy for STIs using doxycycline PEP (200 mg within 24h after sex) in 232 MSM on PrEP for HIV prevention in the Ipergay study. A high rate of STIs without doxycycline PEP was shown (69.7 events per 100-person years of follow-up) and the antibiotic strategy showed an overall reduction in STI incidence of 47%.

There was a significant decrease in chlamydia and syphilis incidence with reductions of 70 and 73% respectively in intent to treat analyses but no clear benefit was shown for gonorrhoea, likely due to the high rate of doxycycline resistance already developed.

A higher rate of gastro-intestinal adverse events was observed in those taking PrEP plus doxycycline compared to those taking PrEP alone (53 vs 41%, respectively, p=0.05). Laboratory abnormality rates did not differ significantly between the two

study arms. Median numbers of sex acts or sex partners and rates of condomless receptive anal intercourse did not change during the study and did not differ between the PEP and the no-PEP arms.

Implications

Whilst the results from this study showed that doxycycline PEP can reduce the incidence of chlamydia and syphilis in this population, we advise extreme caution in the use of doxycycline in this way.

This is because it is likely that any potential benefits of doxycycline PEP would be outweighed by the unknowable risks associated with widespread, unprescribed and unmonitored use of a tetracycline antibiotic, with significant potential to select resistance (both by mutation and transferable mechanisms) not just in STI pathogens, but in other bacterial species as well.

Further studies are needed to assess the selection of antibiotic resistance in both STIs and non-STI bacteria, at both an individual and population level.

For those at risk, following condomless sex we recommend STI testing at appropriate window periods and the treatment of any infections identified should be prescribed by a healthcare professional and be in line with published national guidance. We recommend that the use of doxycycline PEP should be restricted to the research setting at present.

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