New Combo Could Work as Backup Treatment for Drug-Resistant Gonorrhea

However, because this combo is not as effective as the current standard treatment, the search for new options continues.

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Researchers have identified a new two-drug combination treatment for gonorrhea that could serve as a backup treatment for drug-resistant cases of the sexually transmitted infection (STI). However, this new combination is not as effective as the current standard treatment, in particular for throat and rectal infections. So the hunt for new antibiotic options continues in the face of the growing global threat of the emergence of drug-resistant gonorrhea.

The history of antibiotic-resistant gonorrhea (GC)Courtesy of CDC

Publishing their findings in The Lancet, investigators conducted a multicenter, parallel-group, pragmatic, randomized, noninferiority trial comparing treating gonorrhea with gentamicin plus azithromycin, on the one hand, with the current standard treatment of ceftriaxone plus azithromycin, on the other. The trial was conducted at 14 sexual health clinics in England and was open to adults 16 to 70 years old who were diagnosed with uncomplicated genital, throat or rectal gonorrhea.

The participants were randomly assigned to receive a single intramuscular injection of either 240 milligrams of gentamicin or 500 mg of ceftriaxone plus an oral dose of 1 gram of azithromycin.

Jonathan Ross, MD, the chief investigator of the trial and a professor of sexual health and HIV at University Hospitals Birmingham in England, said in a press release: “Our current antibiotic treatment for gonorrhea is beginning to fail. Experience with previous drugs strongly suggests that this could become a widespread problem.”

A total of 1,762 people were screened and 720 people were enrolled in the study between October 2014 and November 2016. A total of 358 people were assigned to the gentamicin group while 362 were assigned to the ceftriaxone group; results were available for 306 (85%) and 292 (82%) members of each group, respectively.

Two weeks after treatment, 299 (98%) of those in the ceftriaxone group and 267 (91%) of those in the gentamicin group were cleared of gonorrhea. Of the 328 people who had a genital infection, 151 of 154 (98%) and 163 of 174 (94%) of those in the ceftriaxone and gentamicin groups were cleared of the STI, respectively. Of those with a throat infection, the cure rates were 96% and 80% in the two study groups, respectively. And of those with a rectal infection, the cure rates in the two study groups were a respective 98% and 90%.

The study authors concluded that gentamicin was not noninferior to ceftriaxone, meaning it was not comparably efficacious but in fact had a lesser efficacy. Therefore, gentamicin, they wrote, “is not appropriate as first-line treatment for gonorrhea but remains potentially useful for patients with isolated genital infection or for patients who are allergic or intolerant to ceftriaxone or harbor a ceftriaxone-resistant isolate. Further research is required to identify and test new alternatives to ceftriaxone for the treatment of gonorrhea.”

The two treatments had similar side effect profiles, although people experienced greater pain at the injection site with gentamicin than with ceftriaxone.

“We believe ceftriaxone should remain the first line treatment for gonorrhea,” Ross said, “with gentamicin as an alternative, particularly for patients with genital infection and those who are allergic or intolerant to ceftriaxone. But further research is required to identify and test new alternatives to ceftriaxone for the treatment of gonorrhea.”

To read a press release about the study, click here.

To read the study abstract, click here.

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