Medical Xpress

Treatment for deadly yeast disease reduced to three days

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The team found the treatment for the deadly brain infection had the same effect after three days, as after the recommended two weeks

(Medical Xpress)—Initial treatment for a brain infection caused by fungus could now be treated in three days, rather than two weeks, due to study by University of Liverpool scientists.

Cryptococcus – a form of yeast – infections are often fatal but are relatively neglected in medical research. They are found in many parts of the world, including Africa, Australasia and South East Asia and mainly

affect people with weakened immune systems. This infection kills up to 700,000 people a year.

Cryptococcus

The University research team tested the effects of the most commonly used drug on Cryptococcus infections of the brain and discovered that although the recommendation for treatment is currently two weeks, the drug has been shown by the new studies to be effective at clearing the fungus within three days.

Professor of Therapeutics and Infectious Diseases, William Hope said: "This infection kills up to 700,000 people a year and is mainly fatal in areas with poor resources. In many parts of the world it is simply unfeasible to administer intravenous drugs for two weeks."

The scientists in the Institute of Translational Medicine examined the effects of amphotericin B deoxycholate (dAmB) over both three and 14 day treatments and found that the effect was the same after three days as it was after two weeks.

The results in animal trials was compared with humans using a range of mathematical modelling techniques, to produce findings which suggest that the three day regime will be equally as effective in people.

The researchers believe that this opens up significant possibilities for treatment in areas where there is a scarcity of medically trained staff, who often have to ration the drugs they administer to patients.

The infection often takes hold in people with AIDS as a result of their immune systems being compromised, and areas with high rates of AIDS are also usually those without resources.

Accelerate changes

Professor Hope added: "A lot of the treatment administered with a variety of drugs is assumed and generalised. This is one example of how experimental medicine can help accelerate changes to improve outcomes for patients."

The next stage of the research will be to test it in clinical trials in humans. The findings were published in the journal *mBio*.

Provided by University of Liverpool

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