CRYPTOCOCCAL MENINGITIS

WHAT IS CRYPTOCOCCAL MENINGITIS?

Cryptococcus is a fungus. It is very common in the soil. It can get into your body when you breathe in dust or dried bird droppings. It does not seem to spread from person to person.

Meningitis is the most common illness caused by Cryptococcus. Meningitis is an infection of the lining of the spinal cord and brain. It can cause coma and death. Cryptococcus can also infect the skin, lungs, or other parts of the body. The risk of cryptococcal infection is highest when your CD4 counts are below 100.

The first signs of meningitis include fever, fatigue, a stiff neck, headache, nausea and vomiting, confusion, blurred vision or sensitivity to bright light. The symptoms may come on slowly.

HIV disease or medications can also cause these symptoms. Therefore, laboratory tests are used to confirm that you have meningitis.

The tests use blood or spinal fluid. Health care providers get spinal fluid by doing a spinal tap. A needle is inserted into the middle of your back just above your hips. The needle removes a sample of spinal fluid. The pressure of the spinal fluid can also be measured. If the pressure is too high, the health care provider may drain some of the fluid. The test is safe and usually not too painful. However, after a spinal tap some people get headaches that can last a few days.

The blood or spinal fluid can be tested for cryptococcus in two ways. A "CRAG" test looks for an antigen (a protein) produced by cryptococcus. A "culture" is a way to see if the cryptococcus fungus can be grown from the sample of spinal fluid. CRAG tests are quick and can produce same-day results. A culture can take a week or more to show a positive result. Spinal fluid can also be tested quickly using a stain.

HOW IS MENINGITIS TREATED?

Meningitis is treated with antifungal drugs. Some physicians use fluconazole (see Fact Sheet 534). It is available in pill form or as an intravenous (IV) drug. Fluconazole is fairly effective, and is generally easy to tolerate. Itraconazole is sometimes used for people who cannot take fluconazole. Other health care providers prefer to use a combination of amphotericin B and flucytosine capsules.

Amphotericin B is a very strong drug. It is given as an injection or a slow intravenous (IV) infusion. Both of these drugs can have serious side effects. Side effects can be reduced by taking Advil or Tylenol a half hour before taking the drug. In a newer form of amphotericin, the medication is encased in fat bubbles (liposomes). This form may have fewer side effects. Cryptococcal meningitis comes back after the first time in about half of the people who get it. Repeat cases are reduced if people keep taking antifungal drugs.

For some people, draining spinal fluid daily to reduce pressure on the brain is also part of treatment.

Starting antiretroviral therapy (ART) can cause problems if you have had cryptococcal infection for a short time. Talk to your health care provider.

HOW DO I CHOOSE A TREATMENT FOR MENINGITIS?

If you have meningitis, you will be treated with antifungal drugs such as amphotericin B, fluconazole, and flucytosine. Amphotericin B is the strongest, but it can damage your kidneys. The other drugs have less serious side effects, but they are less effective at clearing out the cryptococcus.

If meningitis is diagnosed early enough, it can be treated without using amphotericin B. The usual treatment, however, is two weeks of amphotericin B followed by oral fluconazole. The fluconazole is continued for life. Without it, the meningitis is likely to come back.

CAN MENINGITIS BE PREVENTED?

Taking fluconazole when your CD4 count is below 50 can help prevent cryptococcal meningitis. But there are several reasons why most health care providers don't use it:

- Most fungal infections are easy to treat.
- Fluconazole is a very expensive drug.
- Taking fluconazole for a long period of time can lead to yeast infections (such as thrush, vaginitis, or severe candida infection of the throat) that are resistant to fluconazole. These resistant infections can only be treated with Amphotericin B.

THE BOTTOM LINE

Cryptococcal meningitis occurs most often in people with CD4 cell counts below 100. Although antifungal drugs can prevent cryptococcal meningitis, they are usually not used because of their high cost and the risk of developing drug-resistant yeast infections.

If you get meningitis, early diagnosis might allow treatment with less toxic drugs. Contact your health care provider if you have headaches, a stiff neck, vision problems, confusion, nausea, or vomiting.

If you develop meningitis, you will have to continue taking antifungal drugs to prevent the disease from coming back.

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