

Pneumonia (PCP)

PCP is a common form of pneumonia caused by the common fungus –*Pneumocystis jiroveci*– formerly known as *Pneumocystis carinii*. It is a commonly found organism, but it does not cause any problems in people with a healthy immune system.

However, the organism can reproduce in the lungs of people with seriously compromised immune systems, such as people who are at an advanced stage of the HIV infection, and eventually cause pneumonia. It can also affect lymph nodes, the spinal cord, the spleen, the liver and the eyes. Conditions caused by *Pneumocystis* are often known as *pneumocystosis*.

Risk of PCP

People with HIV are at increasing risk of PCP as their CD4 cell count falls. The risk becomes significant below 200 cells/mm³, although most cases occur at even lower CD4 cell counts. PCP was one of the most common causes of death among people with AIDS in the early years of the epidemic. In Spain, PCP is currently the second most frequent disease among immigrant population who have been diagnosed late-stage AIDS.

PC is rarely a fatal disease at present. This is due to the benefits of anti-HIV treatment, improved PCP therapies, and to the use of antibiotics as prophylaxis to prevent the conditions caused by PCP.

HIV positive smokers are three times more likely to develop PCP than non-smokers.

Symptoms

The first common symptoms of PCP include difficulty breathing and/or temperature. Other symptoms may include dry cough and chest pain or chest tightness. Weight loss, diarrhoea and a general feeling of fatigue may also appear as symptoms.

Diagnosis

Diagnostic tests of PCP include X-rays of the chest, measuring the amount of oxygen in the blood and sputum samples. A bronchoscopy may be performed in some cases.

Preventing PCP

If your CD4 cell count is below 200 cells/mm³, it is advisable to take anti-HIV treatment to prevent CD4 cells from further falling. If anti-HIV is not initiated, cotrimoxazole (Septrin®) is recommended to prevent the appearance of PCP. Prophylactic treatment doses can be taken daily by mouth in pill form, but can also be taken three times a week (see InfoVIHtal #23: 'Septrim (cotrimoxazole)').

Treatment of PCP

The Standard treatment for PCP is with cotrimoxazole, which consists of two drugs: trimethoprim and sulfamethoxazole.

Cotrimoxazole treatment given in hospitals is normally injected or intravenous during the first days. Once the disease is cleared, treatment is continued with pills, normally taken at home, until three weeks of treatment are completed.

Cotrimoxazole also acts against other bacteriae that may cause some other infections in people with HIV whose immune systems are seriously compromised.

The use of steroids may be necessary in cases of severe PCP. Although steroids may suppress the immune system, they also can help counter lung inflammation caused by PCP.

You may be given oxygen during PCP treatment, normally by means of a mask or by assisted ventilation. It is important to rest until full recovery from PCP is achieved. Expect to feel tired for about two months following the illness.

Side-effects of cotrimoxazole

Almost 50% of those treated with cotrimoxazole experience side-effects, particularly at the stage of intravenous treatment. Side-effects include rash or hives and nausea. Other more serious side-effects may include blood problems, such as lack of white blood cells and/or platelets, and kidney problems. The appearance of these serious side-effects can lead to changes in treatment or alternative treatment such as trimethoprim and dapson, pentamidine, atovaquone or clindamicin and primaquine.

However, when used as PCP prophylaxis side-effects are rare and tend to be mild. This is because the dose prescribed in prevention is lower than the dose used to treat PCP.

PCP and anti-HIV treatment

Many of the cases of PCP involve people who do not know they are HIV-positive, whose immune systems are deteriorated and have low CD4 cell counts.

It is normal for the PCP to be treated first, and then for anti-HIV treatment to be started afterwards as soon as the PCP is under control.