

Just the Facts...

Charmak Disease In Afghanistan

What is charmak disease?

Charmak disease, sometimes called Gulran disease or camel belly, is an unusual and potentially fatal liver disease. It is caused by eating wheat flour contaminated with seeds of charmak weeds (*Heliotropium* plants), which contain pyrrolizidine alkaloids. Charmak weeds grow in wheat and other grain fields following abnormally dry weather. While not exclusive to Afghanistan, recent outbreaks of charmak disease have been reported in the Gulran district of Herat Province.

How common is charmak disease?

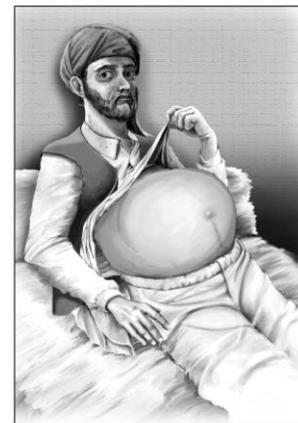
Charmak disease is fairly uncommon. Intermittent outbreaks have been reported in the Gulran district of Afghanistan dating back to the mid-1970s.

How do you get charmak disease?

Soldiers can get charmak disease by eating flour-based foods, such as bread, that have been derived from wheat grain harvested from fields with a high concentration of charmak weed. It is believed that it is also possible to get the disease by drinking milk from goats that graze on charmak weeds.

What are the symptoms of charmak disease?

Early symptoms of charmak disease include anorexia, loss of weight, fatigue, severe abdominal pain, and vomiting. Liver damage, jaundice, and a hugely extended stomach often appear several weeks after symptoms begin. The liver damage is caused by the obstruction of major veins in the liver associated with consumption of pyrrolizidine alkaloids. Left untreated, charmak disease can be fatal within 3 to 9 months following the appearance of an extended stomach.



How is charmak disease diagnosed?

The most conclusive way to diagnose charmak disease is through biopsy of the liver.

How is charmak disease treated?

Treatment of charmak disease involves eliminating contaminated food from the diet, improving nutrition, using vitamin and mineral supplements and providing good hospital care. Extracting unnecessary liquids from a patient's swollen stomach may also be helpful in serious cases. Action should be taken quickly once the toxicity becomes evident and should be overseen by a medical provider at all times.

How can you prevent charmak disease?

Soldiers can prevent charmak disease by not eating or drinking any locally grown or produced foods or beverages while deployed in Afghanistan.

**The majority of this content was gathered from newspaper articles, and as a result, the accuracy of the information provided above could not be fully verified.

Sources:

World Health Organization, September 2001./IRIN, 15 May 2008, 16 December 2008, 18 December 2008./The Lancet, August 1976, volume 2, issue 7980, pp 269-271.

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