

## Current major events

### Gulran Disease An Outbreak in Afghanistan

On 2 April 2008, the Ministry of Public Health (MOPH), Afghanistan reported an outbreak in Western Afghanistan, in the Gulran district of Herat Province. The outbreak presented as hepatic veno-occlusive disease (VOD).

This outbreak started in November 2007. As of April 2008 a total of 175 cases, including 13 deaths were reported from more than 17 villages. The disease is believed to be caused by exposure to pyrrolizidine alkaloids (PAs). Preliminary results of charmac samples from Gulran tested in the National Institute for Public Health and the Environment (RIVM) Laboratory, The Netherlands show high levels of PAs, mostly heliotrine and lasiocarpine.

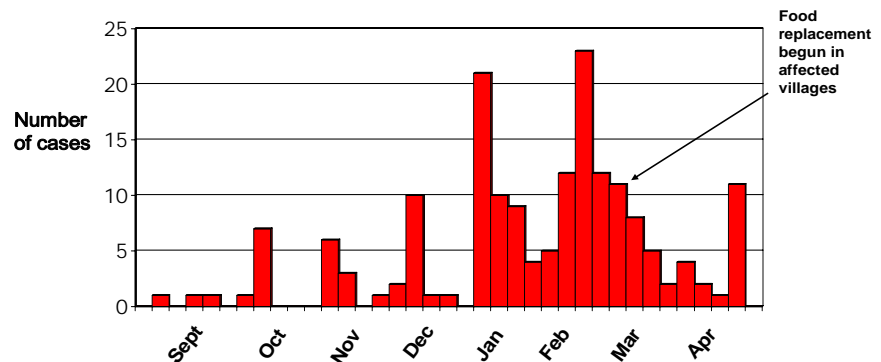
On 3 May 2008, WHO and MOPH visited the Gulran district headquarters of Qarabagh and the village of Zergy, the first village to report Gulran disease.

### Editorial note

Since the first week of April, WHO and partners have been assisting the Ministry of Public Health in Afghanistan to respond to an outbreak of a disease that presents with hepatic veno-occlusive syndrome. The outbreak affected the Gulran District of Herat Province. The onset of the outbreak is reported to be November 2007, thus indicating the insidious nature of evolution of the outbreak.

Veno-occlusive disease of the liver is not new in this part of Afghanistan. In 1974, a similar outbreak was reported from the same districts of north-western Afghanistan. It was traced to consumption of bread made from wheat contaminated with seeds of *Heliotropium* plants (Charmac), which are shown to contain pyrrolizidine alkaloids. Investigation at the time disclosed that occasional cases

### Reported Gulran Disease Cases by Week of Onset, Gulran District, 2007-2008 n=175



**Symptoms:** Patients may present with vomiting and severe abdominal pain. Hepatomegaly, right upper quadrant abdominal sensitivity, and ascites follow. Jaundice is seen inconsistently.

#### Some Facts on PAs:

- Acute dosing with large amounts of pyrrolizidine alkaloids (PA) produces primarily liver disease in humans, but gastroenteritis may also be seen.
- Diagnosis is often difficult, because pyrrolizidine alkaloids are usually excreted within 24 hours, but the symptoms may not appear for days or weeks.
- Toxicity may result from both subacute and chronic exposures, is more likely to occur in children, and may be passed transplacentally from mother to fetus
- Veno-occlusive disease is the primary symptom seen in humans
- Prevention of absorption is only useful if an ingestion has just occurred

of similar disease to the outbreak were observed in the past.

VOD of the liver is a form of toxic liver damage caused by pyrrolizidine alkaloids. It has been observed in many rural population around the world and other outbreaks have been documented from Jamaica, South Africa and Iraq (1994).

The ultimate control of VOD outbreaks caused by PAs in Afghanistan should focus on agriculture sector. In the short term, patients need to be cared for, the population should be educated and provided with safe grains. In the long term, the government need to focus on agriculture policies that will reduce the incidence of contamination of grains with *Heliotropium* (Charmac) weeds.

#### Update on outbreaks

**Cholera:** (Sudan) reported from s. Sudan; **AWD:** in Somalia; **VOD:** More new cases reported from Afghanistan

#### Current public health events of international concern

[cumulative N° of cases (deaths), CFR %]

##### Avian influenza

Egypt [50 (22), 44%]

Indonesia [133 (108), 81.2%]

##### Cholera

Kenya [1243 (67), 5.4%]

Sudan [23 (2), 8.7%]

##### Wild Polio Virus

One case detected in S. Sudan, living in Ethiopia. [1 (0), 0%]

##### VOD: (Pyrrolizidine Poisoning)

Afghanistan [175 (13), 7.4%]

##### Hand Mouth & Foot Disease

China [6545(22), 0.3%]

##### Yellow fever

C.A.R. [8(0), 0%]

##### Dengue fever

Brazil [121586 (103), 0.1%]

(\*=Unofficial figures)  
CFR=Case-Fatality Rate