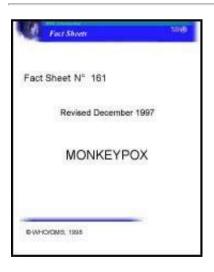


Fact sheet No 161: Monkeypox - Revised December 1997 (WHO, 1997, 2 p.) *(introduction...)* MONKEYPOX

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MONKEYPOX

Monkeypox is a viral disease with a clinical presentation in humans similar to that seen in the past in smallpox patients. Smallpox no longer occurs, following its worldwide eradication in 1980, whereas monkeypox is still seen as a sporadic disease in parts of Africa.

The virus responsible for monkeypox is related to the virus that used to cause smallpox (both are orthopoxviruses). Vaccination against smallpox (no longer necessary) also gave protection against monkeypox. Before the eradication of smallpox, vaccination was widely practised and protected against both diseases. However, children born after 1980 have not been vaccinated against smallpox and are likely to be more susceptible to monkeypox than older members of the population. The death rate from monkeypox is highest in young children, reaching about 10%.

Most cases occur in remote villages of Central and West Africa close to tropical rainforests where there is frequent contact with infected animals. Monkeypox is usually transmitted to humans from squirrels and primates through contact with the animal's blood or through a bite.

Following reports of ongoing cases of human monkeypox in the Democratic Republic of the Congo ("DRC", formerly Zaire) representing a new pattern of the disease, the Ministry of Health in DRC and the World Health Organization (WHO) organized two investigations in February and October 1997.

In the past, an outbreak of monkeypox in DRC would have been limited to the village and would not last long because it did not spread extensively after the first patients recovered. However, the present study indicates that monkeypox disease is changing its pattern of infection in humans. The outbreak had a much higher rate of person to person transmission than seen previously, and spread through many generations of transmission, thus maintaining the outbreak for more than a year.

Previous studies over a twenty-year period had shown that the rate of transmission of monkeypox within households was low, suggesting that the disease had a low potential for transmission from person to person. Outbreaks were generally self-limiting after one or two sequential transmissions. However, the two recent WHO studies have to-date shown that:

- The outbreak in DRC presents the largest cluster of monkeypox cases albeit with less severe clinical disease - ever reported: 511 suspect cases were identified with onset of disease between February 1996 and October 1997; some of these suspect cases are thought to be chickenpox and laboratory confirmation studies are underway;

- The proportion of suspect cases who were 16 years of age or older (21%) was higher than previously reported (8%). Young children had mostly been affected in previous outbreaks;

- The percentage of suspect cases from person to person transmission (78%) was higher than previously reported (30%). This was associated with the clustering of cases in household compounds and prolonged chains of transmission from person to person;

- Secondary attack rates among contacts of primary cases (those thought to be infected by animal contact) have been calculated, on a preliminary basis, at 8%, which is similar to secondary attack rates of 4-12% estimated in Zaire in the early 1980s;

- The proportion of deaths (2%) was lower than previously reported (10%); all were aged under eight years and died within three weeks of disease onset.

The ending of vaccination programmes against smallpox in the late 1970's has probably led to an increase in susceptibility to monkeypox and could explain the larger size of the most recent outbreak, the higher proportion of patients aged 15 and over, and the spread through many generations of transmission.

WHO is concerned that monkeypox could pose a public health problem in this region of DRC and therefore vigilance must be maintained by strengthening

detection systems for monkeypox and completely investigating future outbreaks.

Further WHO studies are planned in the region to determine the need for additional risk-reduction measures.

In May 1996, the 49th World Health Assembly decided that the last remaining stock of smallpox virus held in two research centres in the Russian Federation and the United States of America should be destroyed as the last step in the complete and final global elimination of smallpox. It also decided that WHO would keep 500 000 doses of smallpox vaccine (which is also effective against monkeypox). The smallpox vaccine seed virus (vaccinia virus strain Lister Elstrea) will be maintained in the WHO Collaborating Centre on Smallpox Vaccine at the National Institute of Public Health and Environmental Protection in Bilthoven, Netherlands, so that new stocks of vaccine can be produced if needed.

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