Elsevier has created a Monkeypox Information Center in response to the declared public health emergency of international concern, with free information in English on the monkeypox virus. The Monkeypox Information Center is hosted on Elsevier Connect, the company's public news and information website.

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MONKEYPOX IN AFRICA: FUTURE HEALTH HAZARD OR PUBLIC HEALTH NUISANCE?

MONKEYPOX is a zoonotic disease with systemic manifestations similar to those of variola (smallpox). It it caused by a member of the *Orthopoxvirus* genus[1-4] that also includes camelpox, cowpox, ectromelia, rodentpox, and vaccinia. The virus was initially isolated in 1958 from outbreaks of disease in cynomolgus monkey colonies of Singapore origin in Copenhagen,[5] but human monkeypox was not recognised until 1970 in the Equateur region of Zaïre, from which smallpox had disappeared some two years previously.[1] In 1979, the World Health Organisation believed monkeypox to be the most important orthopox virus infection in the post-smallpox era, and one that required continued epidemiological surveillance.[6]

Monkeypox occurs sporadically in small villages of the tropical rainforests of western and central Africa; although most *reported* cases (155 between 1970 and 1983[4]) have occurred in Zaïre, the coastal areas of most West African countries also have reservoirs of infection.[1,3,4] The animal reservoirs are largely unknown; chimpanzees[7,8] and other subhuman primates,[4,7] squirrels,[9] and gazelles[3] have been implicated and the majority of cases have had contact with animal carcasses of some kind, most apparently healthy. 8–28% of forest-dwelling primates in West Africa have orthopox virus antibodies, and in three species monkeypox-specific antibodies have been detected.[9] Man is therefore an incidental host, and disease is preventable by smallpox vaccination.[1]

The exact incubation period is unknown, but the mean is probably between 10 and 14 days.[1,4] Most cases occur in children (over 80% under 10 years[1]) whereas with smallpox unvaccinated individuals of all ages were affected. Clinically the only clear difference from smallpox is a prominent lymphadenopathy affecting cervical, inguinal, and less obviously postauricular and submandibular glands in about 90% of cases; the exanthems of the two diseases are identical.[1] Mortality rate is thought to be 10–20%.[1,10] Person-to-person transmission (usually from household contacts) seems to be uncommon,[4,11] as has been confirmed lately in a large study from Zaïre.[12] Between 1980 and 1984, 214 cases, most of them in children under 15 years (130 primary, 22 co-primary, 62 secondary) and 2510 of their contacts were investigated. Attack rates in contacts with and without a vaccination scar were 16 (0·9%) and 46 (7·2%), respectively.

Histopathological data on human tissue are extremely scanty, but a report with detailed electronmicroscopic observations of a cutaneous lesion from a 2-year-old child who died of the disease has been published;[13] the features were indistinguishable from those of smallpox and tanapox[2] (an unclassified poxvirus disease confined to Kenya and Zaïre). The question of whether variola-like viruses can be naturally derived from monkeypox virus has been addressed by both biological and DNA-mapping techniques.[14] Spontaneous production of one from the other was considered genetically impossible, and variola-like viruses that have occasionally been recovered from monkeypox virus stocks must therefore have had exogenous origins. In order to unravel evolutionary divergence among orthopox viruses, nucleotide sequences in monkeypox, variola, and vaccinia viruses have been compared.[15] Observations of monkeypox virus pathogenicity in chick, rabbit, and guineapig have also been reported.[16]

More information is required on the prevalence of human infection in high-risk areas (unlike smallpox, most cases are subclinical), for which a sensitive and specific serological test that will not cross-react with other orthopox viruses is required.[3,17] It is also important to learn more about wildlife ecology and mode of transmission from the largely unknown reservoir;[1,7] if similar reservoirs of variola virus had existed smallpox eradication could not have been achieved.[15] Diseases resembling smallpox (the last known case occurred in Somalia in October 1977[1,6]) should be carefully monitored, if merely to provide an assurance that they are not a potential future hazard to mankind.[1,17] Monkeypox is not currently a serious health risk, person-to-person transmission is limited,[11] and reintroduction of smallpox vaccination would be unwarranted.[3] However, careful surveillance of affected areas (mainly in Zaïre) is necessary for the foreseeable future,[4] probably well after 1989.[17] During the next few years immunity conferred by smallpox vaccination will decline progressively;[3,17] is it possible that the monkeypox saga has only just begun?

LACTATE TRANSPORTER DEFECT: A NEW DISEASE OF MUSCLE?

HAVING described a deficiency of myoadenylate deaminase in muscle as a "new disease of muscle" in 1978,[1] William Fishbein has now entered the same arena with another muscle disease which, if confirmed, may have opened up a new class of disordered muscle chemistry. The latest discovery suggests an impairment of the membrane lactate transporter in human red cells and skeletal muscle.[2]

The evidence is based on the case-history and investigation of a 26-year-old military drill instructor who, although noted to be in splendid physical condition, had had three brief episodes of severe chest pain over the preceding five years. In the course of investigations for a possible

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