

# **Monkeypox-*Orthopoxvirus***

- **MONKEYPOX IS A ZOO NOTIC DISEASE**
- **THIS IS NOT A NOVEL VIRUS, IT WAS FIRST RECOGNIZED IN 1958 IN PRIMATES.**
- **THE DISEASE IS MOST PREVALENT IN CENTRAL AND WEST AFRICA**
- **THERE ARE 2 CLADES OF THE VIRUS THE WEST AFRICAN CLADE AND THE CENTRAL AFRICAN CLADE (CONGO BASIN)**
- **MONKEYS AND HUMANS ARE SPORADICALLY INFECTED**
- **HOSTS ARE THOUGHT TO BE RODENTS**
- **TRADITIONALLY SECONDARY ATTACK RATES IN HOUSEHOLD CONTACTS OF 9% IN UNVACCINATED (LESS TRANSMISSIBLE THAN SMALLPOX)**
- **SMALLPOX VACCINATION IS THOUGHT TO PROVIDE 85% PROTECTION**

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- **IN 2003 A MONKEYPOX OUTBREAK IN THE US OCCURRED AS A RESULT OF EXPOSURE TO ILL PRAIRIE DOGS (INFECTED AFTER EXPOSED TO INFECTED RODENTS FROM GHANA)**
- **THE INCUBATION PERIOD IS USUALLY FROM 6-13 DAYS BUT CAN BE UP TO 21 DAYS**
- **PATIENTS PRESENT WITH FEVER, CHILLS, FATIGUE, HEADACHE, MUSCLE ACHES, BODY ACHES AND SWOLLEN LYMPH NODES**
- **LYMPHADENOPATHY (COMMONLY SUBMANDIBULAR, CERVICAL AND SUBLINGUAL)**
- **DISTINCTIVE RASH APPEARS 1-3 DAYS AFTER ONSET OF SYMPTOMS AND USUALLY BEGINS ON FACE THEN SPREADS TO BODY**
- **THE RASH CAN BE CONFUSED WITH OTHER RASHES SUCH AS VARICELLA, SHINGLES, SYPHILIS, CHANCROID, LGV, MOLLUSCUM AND HERPES**
- **THE RASH CAN CONSIST OF MACULES, PAPULES, PUSTULES, VESICLES, SCABS, BE DEEP OR UMBILICATE**
- **ILLNESS LAST 2-4 WEEKS**

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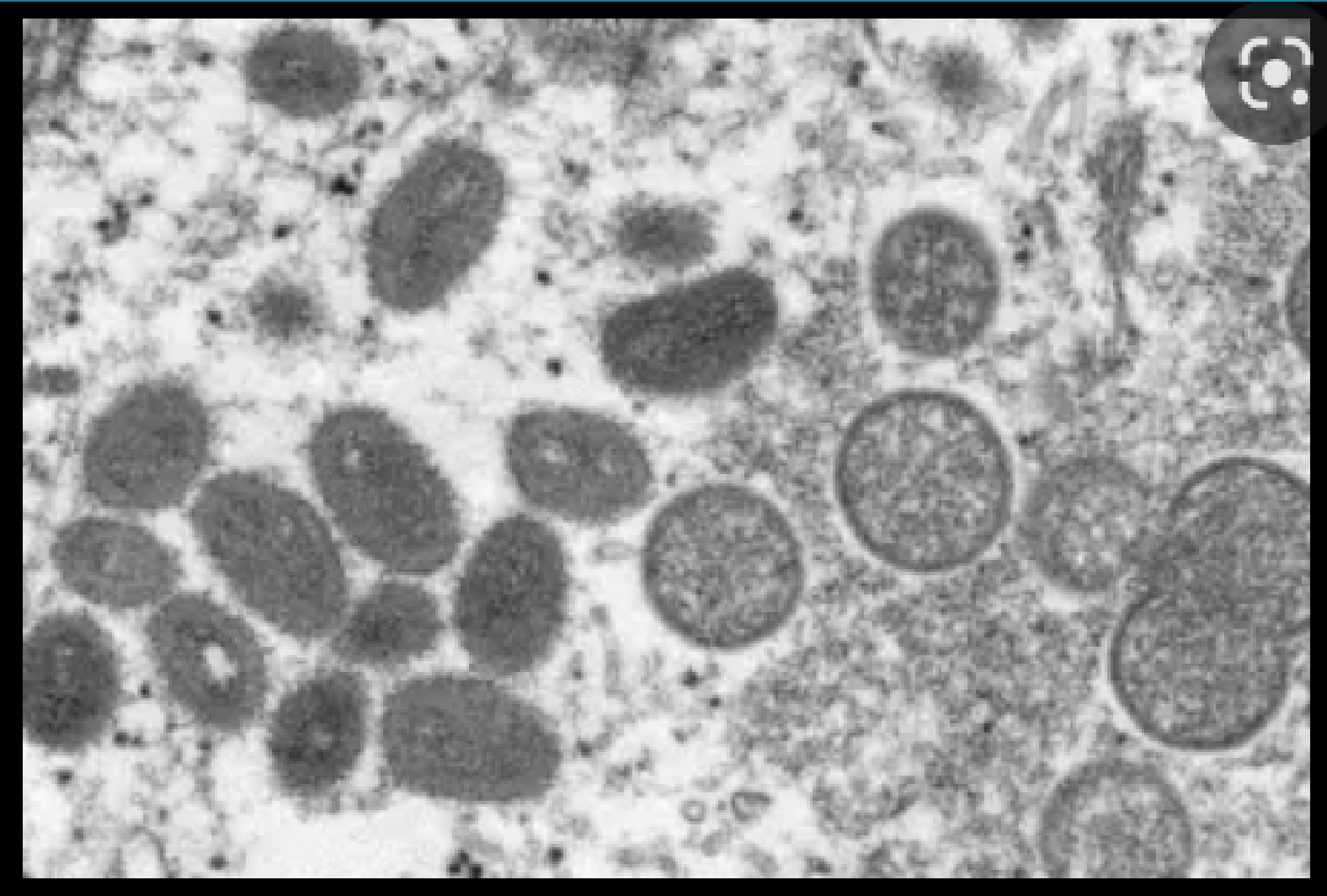
- **TRANSMISSION OCCURS WHEN COMING INTO CONTACT WITH INFECTED PERSON/ANIMAL/FOMITES**
- **THE VIRUS CAN BE TRANSMITTED THROUGH SKIN, RESPIRATORY TRACT, MUCOUS MEMBRANES**
- **USUALLY IT IS LARGE DROPLET TRANSMISSION, HOWEVER SOME AEROSOL TRANSMISSION CAN OCCUR**
- **DIAGNOSIS IS WITH PCR**
- **MOST COMMON COMPLICATION IS SECONDARY SKIN INFECTIONS, FOLLOWED BY RESPIRATORY, NEURO-PSYCH,GI DISORDERS AND KERATITIS(PNEUMONIA/ENCEPHALITIS).**
- **THIS IS NOT SOLELY A SEXUALLY TRANSMITTED DISEASE BUT DUE TO THE NATURE OF CLOSE CONTACT AND MODE OF TRANSMISSION, CASES HAVE BEEN LINKED**
- **OVERALL MORTALITY WAS ~10%**
- **WEST AFRICAN CLADE CASE FATALITY RATIO (CFR) IS ~ 1-3.6%**
- **SEVERE DISEASE MAY OCCUR IN CHILDREN, IMMUNOCOMPROMISED INDIVIDUALS AND PREGNANT WOMEN**

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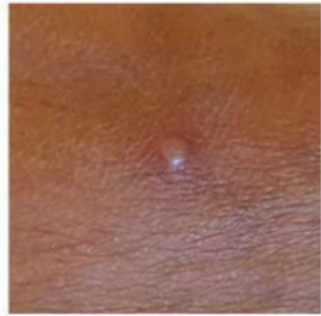
- **TREATMENT IS MOSTLY SUPPORTIVE**
- **VACCINIA VACCINATION**
- **CONTACT TRACING AND ISOLATION**
- **TX JYNNEOS(IMVAMUNE VACCINE) CIDOFIOVIR, BRINCIDOFOVIR,TECOVIRIMAT, VACCINIA IMMUNOGLOBULIN (MOST DATA IN ANIMALS/NOT HUMANS)**
- **VACCINE CAN BE GIVEN FROM 4-14 DAYS AFTER EXPOSURE BUT EARLIER VACCINATION MAY REDUCE SYMPTOMATIC DISEASE**
- **WITH THE LONG INCUBATION PERIOD AND GLOBALIZATION OF TRAVEL, WE SHOULD EXPECT MANY MORE CASES OF MONKEYPOX TO BE DETECTED**

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- A LARGE EPIDEMIC OF MONKEYPOX CAN CAUSE A SIGNIFICANT STRAIN IF THE RIGHT PUBLIC HEALTH MEASURES ARE NOT IN PLACE
- MONKEYPOX HAS BEEN CONFIRMED IN ~17 COUNTRIES AND 150+ PRESUMPTIVE ORTHOPOXVIRUS CASES DETECTED
- IN THE US 1 CONFIRMED MONKEYPOX IN MASSACHUSETTS, CASES IN NEW YORK, UTAH, FLORIDA AND WASHINGTON CONFIRMED ORTHOPOXVIRUS
- PREVENTION SAME PRECAUTIONS CURRENTLY IN USE FOR COVID-19 ARE PROTECTIVE FOR MONKEYPOX
- HANDWASHING, MASKS, PPE, AIRBORNE ISOLATION/NEGATIVE PRESSURE, ISOLATE UNTIL ALL LESIONS HAVE CRUSTED OVER,
- IF YOU DO NOT REQUIRE MEDICAL ATTENTION, WHEN ISOLATING AT HOME STAY IN A SEPARATE ROOM, KEEP LESIONS COVERED, WEAR A MASK IF LEAVING THE ROOM AND ENTERING COMMON AREAS, AVOID CONTACT WITH WILD OR DOMESTIC ANIMALS, AVOID ANY CONTACT WITH IMMUNOCOMPROMISED INDIVIDUALS
- ANY EXPOSED INDIVIDUALS SHOULD MONITOR FOR SYMPTOMS UP TO 21 DAYS AFTER EXPOSURE
- AT THIS POINT THERE IS NO EVIDENCE OF ASYMPTOMATIC TRANSMISSION
- THIS IS AN EVOLVING SITUATION AND INFORMATION IS SUBJECT TO CHANGE



dumbbell shaped enveloped double stranded dna virus



a) early vesicle,  
3mm diameter



b) small pustule,  
2mm diameter



c) umbilicated pustule,  
3-4mm diameter



d) ulcerated lesion,  
5mm diameter



e) crusting of a mature  
lesion



f) partially removed  
scab

Images of individual monkeypox lesions



(lesions are all in the same stage, centrifugal distribution) cropping,  
affects palms/soles, subungual lesions, more external genital  
involvement, lesions are painful and can be itchy when they crust