DEPARTMENT OF MICROBIOLOGY
INFECTIOUS DISEASE BULLETIN
VOLUME 1 ISSUE 6 JUNE 2022

A 4-year girl child fully immunized for age, was brought with complaints of mild fever and coryza for 2 days. There was history of recurrent rhinorrhea triggered by exposure to cold substances (every 15 day for last 3-4 months) not associated with fever every time. There was no history suggestive of severe respiratory infections or ear infection.

However, she appeared to be thin for her age and height, which was confirmed on examination and the child was found to have moderate wasting (weight for height - at 3rd percentile). On further enquiring about the cause of the same, the mother gives the history of child not gaining weight for past 1 year despite significant history of increased appetite. She also has increase frequency of stools for last 1 year, passing stool 3 times in a day after meal. However, there was no history of polyuria, polydipsia, abdominal pain, distension, jaundice, steatorrhea, constipation or any urinary abnormalities.

On examination her vitals were stable, the child did not have pallor, icterus, cyanosis, lymphadenopathy, other signs of malnutrition, edema. Her systemic examination was normal, thyroid normally palpable.

Taking into account of her inability to gain weight despite increased appetite, and slightly increased frequency of bowel movement, and recurrent episodes of rhinitis, a stool sample was sent for microbiological examination which on microscopy demonstrated the below finding. (Fig 1)

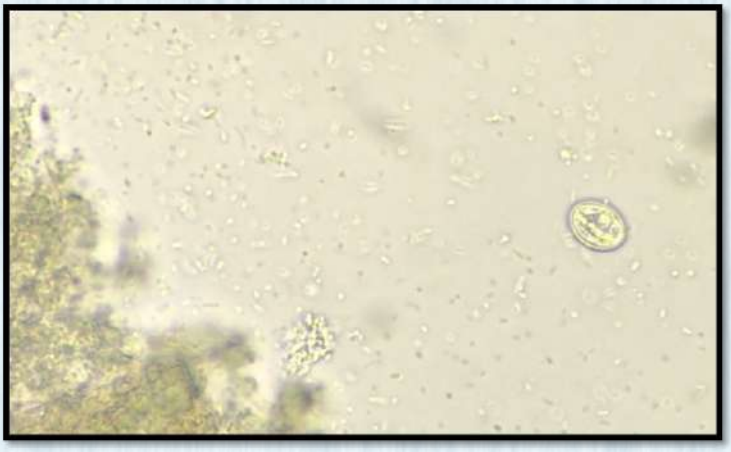

Fig 1: Stool wet mount stained with Lugol's Iodine (40x)

Case credit – Dr. Pinky Meena, Assistant Professor, Department of Pediatrics

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A Case of Chronic Giardiasis in a 4-year-old child

The possibility of Giardia infection was suspected due to child's inability to gain weight despite increased appetite, and increased frequency of bowel movement from past 1 year. Stool microscopic examination demonstrated numerous cysts of Giardia intestinalis. She was treated with metronidazole for 7 days (Metronidazole 200 mg oral tablet, 1/2 Tablet, TDS). Follow of stool microscopic examination done twice at a gap of 7 days were reported negative for Giardia. Further, Survey of family members was also done and the Anganwadi health worker was advised to send stool REM of all children attending the anganwadi, the same is under process.

With this case we reemphasize the old school teaching of keeping local epidemiological factors and common etiology first while evaluation and before going for extensive investigations. Giardiasis should be suspected in any case with malnutrition, and the need for active assessment of anthropometry in all children.

Treatment of giardiasis

Drug	Dose	
	Adults	Children
Drugs of choice		
Tinidazole*	2 g orally, single dose¶	Age ≥3 years: 50 mg/kg orally, single dose (maximum dose 2 g)
Nitazoxanide$^{\Delta}$	500 mg orally 2 times per day for 3 days	Age 1 to 3 years: 100 mg orally 2 times per day for 3 days Age 4 to 11 years: 200 mg orally 2 times per day for 3 days Age ≥12 years: Same as adult dose
Alternative agents		
Metronidazole$^{\diamond}$	500 mg orally twice daily OR 250 mg orally 3 times per day; duration 5 to 7 days¶	15 mg/kg orally divided 3 times per day for 5 to 7 days (maximum 250 mg per dose)
Albendazole	400 mg orally once daily for 5 days	10 to 15 mg/kg orally once daily for 5 days (maximum 400 mg per dose)
Mebendazole	200 mg orally 3 times per day for 5 days	200 mg orally 3 times per day for 5 days
Paromomycin§	10 mg/kg orally 3 times per day for 5 to 10 days	10 mg/kg orally 3 times per day for 5 to 10 days
Furazolidone$^{¥}$	100 mg orally 4 times per day for 7 to 10 days	2 mg/kg orally 4 times per day for 7 to 10 days (maximum 100 mg per dose)
Quinacrine	100 mg orally 3 times per day for 5 days	2 mg/kg orally 3 times per day for 5 days (maximum 100 mg per dose)‡

Note: Treatment refractory clinical infections by Giardia are increasingly been reported from India against the 5-nitroimidazole drug metronidazole

Case credit – Dr. Pinky Meena, Assistant Professor, Department of Pediatrics

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ALL YOU NEED TO KNOW ABOUT MONKEYPOX

Monkeypox is a viral zoonosis with symptoms similar to those seen in the past in smallpox patients, although it is clinically less severe. It is an enveloped double-stranded DNA virus that belongs to the Orthopoxvirus genus of the Poxviridae family.

MPX was first discovered in 1958 in colonies of monkeys kept for research, hence the name 'monkeypox.' The first human case of monkeypox was reported from Democratic Republic of the Congo (DRC) in 1970

How it began?

On May 13, the U.K. reported to the WHO 1 probable and 2 confirmed cases of monkeypox from a single household, in people who had not traveled to a monkeypox-endemic area.

About a week earlier, the U.K. had also reported a monkeypox case in a traveler from Nigeria, but it does not appear that person spread the virus to anyone.

By May 21, the WHO counted 92 confirmed and 28 suspected cases in Europe, Australia, Canada and the U.S.

What is unusual this time ?

The unprecedented size of the outbreak makes it unusual, along with its larger geographic distribution and the fact that many — but not all — of the cases have occurred in men who have sex with men.

As the European CDC has written, this is "the first time that chains of transmission are reported in Europe without known epidemiological links to West or Central Africa," and these "are also the first cases worldwide reported among MSM."

CURRENT SITUATION

Since 1 January and as of 22 June 2022, 3413 laboratory confirmed cases and one death have been reported to WHO from 50 countries/territories in five WHO Regions

The majority of laboratory confirmed cases were reported from the WHO European Region. Other regions reporting cases include: the African Region, Region of the, Eastern Mediterranean Region and Western Pacific Region. One death was reported in Nigeria in the second quarter of 2022.

India hasn't reported any case so far

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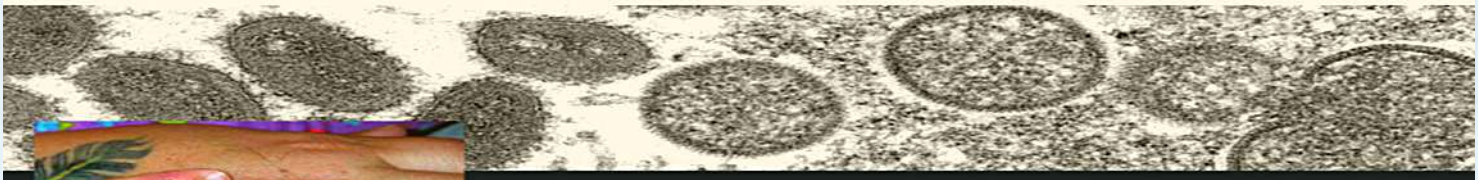
How does monkeypox spread?

Monkeypox is **transmitted through contact with an infected person** or animal, or material contaminated with the virus. Person-to-person, it can spread through physical contact, including sexual contact.



The rash, bodily fluids and scabs are particularly infectious.

Monkeypox can spread through:

CLOTHING | BEDDING | TOWELS | UTENSILS | SALIVA | SKIN-TO-SKIN CONTACT | MOTHER-TO-CHILD

What are the symptoms of monkeypox?

Monkeypox is a **usually mild virus that causes fever as well as a bumpy rash.** It is mostly transmitted to people from wild animals but **human transmission is also possible.**

The rash tends to first develop on the face before spreading elsewhere on the body

FEVER | INTENSE HEADACHE | MUSCLE ACHES | BACK PAIN

LOW ENERGY | SWOLLEN LYMPH NODES | SKIN RASH/ LESIONS

How to treat monkeypox

In most cases, monkeypox symptoms **resolve on their own without** the need for treatment.

Infected people should let the rash or sores dry out if possible or cover it with a dressing to protect the area.

Touching any sores should be avoided.

AVOID TOUCHING SORES | CORTISONE-FREE MOUTH RINSE | CORTISONE-FREE EYE DROPS | VACCINE (developed for smallpox) | ANTI-VIRAL (tecovirimat or TPOXX)

GUIDELINES FOR MANAGEMENT OF MONKEYPOX DISEASE Ministry of Health and Family Welfare
GOVERNMENT OF INDIA
Guidelines for Management of Monkeypox Disease.pdf (mohfw.gov.in)

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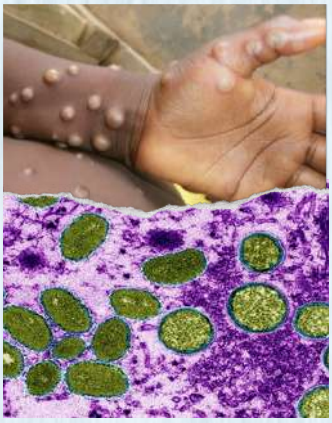
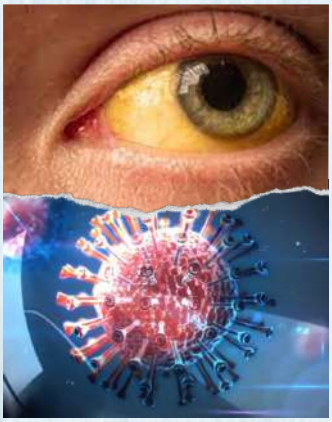
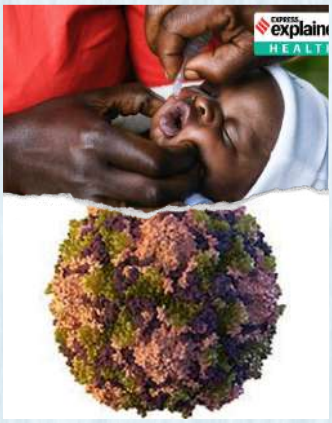
Disease Outbreak News (DONs) - June 2022



1) Multi-country monkeypox outbreak: situation update
https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON396



2) Severe acute hepatitis of unknown aetiology in children - Multi-country
https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON394



3) Wild poliovirus type 1 (WPV1) - Mozambique
https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON395

4) Cholera – Pakistan
https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON391

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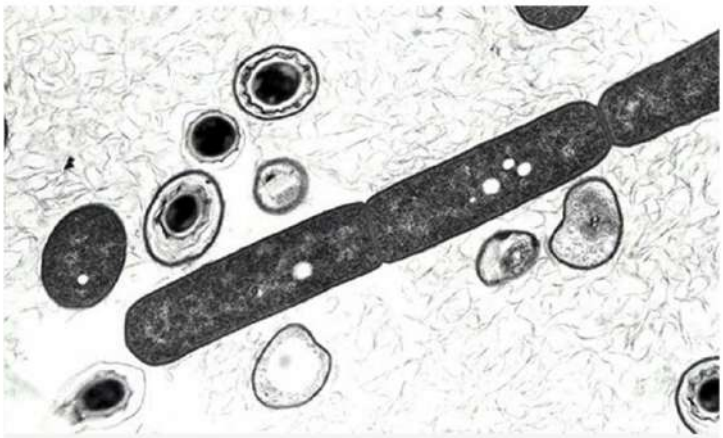
5) Crimean-Congo Hemorrhagic Fever – Iraq

https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON386

BREAKING NEWS



The bacteria that causes anthrax occurs naturally in soil and affects domestic and wild animals.

Anthrax Outbreak In Kerala Forest: All You Need To Know

Kerala has reported the death of some wild boars due to an anthrax outbreak in Athirappilly forest region. State Health Minister Veena George said that local authorities, investigating the wild boar carcasses, found traces of the Bacillus anthracis bacteria.

Microbiology

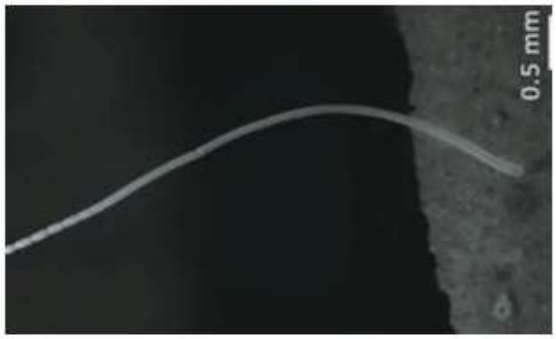
Scientists discover world's largest bacterium, the size of an eyelash

At about 1cm long, Thiomargarita magnifica is roughly 50 times larger than all other known giant bacteria

Hannah Devlin *Science correspondent*

@hannahdev

Thu 23 Jun 2022 19.00 BST



Thiomargarita magnifica, which was discovered on decaying mangrove leaves in shallow tropical marine marshes. Photograph: Vollard et al

Scientists have discovered the world's largest known bacterium, which comes in the form of white filaments the size of human eyelashes, in a swamp in Guadeloupe.

At about 1cm long, the strange organism, *Thiomargarita magnifica*, is roughly 50 times larger than all other known giant bacteria and the first to be visible with the naked eye. The thin white strands were discovered on the surfaces of decaying mangrove leaves in shallow tropical marine marshes.

WORLD HEPATITIS DAY

28 JULY 2022