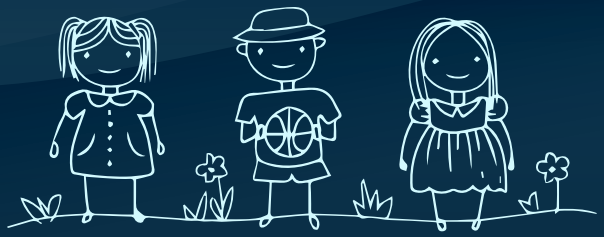
APGAN

Commonwealth Association of Paediatric Gastroenterology & Nutrition

eBulletin

Year: 01 Vol: 01 September 2024

What inside...



for a better world for chieldren...

About us

CAPGAN is the Commonwealth professional and scientific association of paediatricians which aims to promote the knowledge of, and training in, paediatric gastroenterology, hepatology and nutrition throughout the Commonwealth, especially amongst developing countries.

CAPGAN seeks to foster collaborative research in these fields, hold regular scientific meetings and be a source of authoritative advice to both national and international agencies within the Commonwealth on the problems of paediatric gastroenterology and hepatology and in particular the problems of childhood diarrhoea and malnutrition. CAPGAN exerts a positive influence as advocates for the welfare of children of the Commonwealth.

Mission & Vision

The aims of CAPGAN are to promote knowledge, research, education, and training in pediatric gastroenterology, hepatology, and nutrition throughout the Commonwealth, especially amongst developing countries.

Dear CAPGAN members,

Hello to all CAPGAN members throughout the Commonwealth - and beyond!

We are delighted to send you this first edition the CAPGAN eBulletin. We plan that the eBulletin will keep you updated regarding forthcoming meetings and webinars and also discuss clinical issues and highlight recent research that is directly relevant to our practice. We are particularly keen to generate content that supports the development of our younger members training in clinical and academic PGHN in lower-resource settings.

We are very grateful to Dr. Salahuddin Mahmud, Bangladesh Shishu Hospital & Institute, Dhaka, Bangladesh for leading on the development of the eBulletin. We are also grateful to the four CAPGAN Regional Representatives (https://capgan.net/council-membership-list/) who have kindly agreed to lead in turn on contributing to each quarterly edition – as follows:

Edition	Region	Regional Representative	E mail
January	Africa	Rachel Mitole	rechmitole@gmail.com
April	Americas	Naveen Mittal	mittaln@uthscsa.edu
August	Europe	Dharam Basude	dbasude@googlemail.com
December	Oceana	Nikhil Thapper	Nikhil.Thapar@health.qld.gov.au

We hope that this eBulletin will be a forum for you to share your:

- interesting clinical cases or images
- research findings
- news of upcoming events

Please do submit suitable content at any time either through your regional representative or directly to Dr. Salahuddin Mahmud.

We hope that you enjoy reading this first edition and look forward to your contributions to subsequent editions.

Sincerely,

Neelam Mohan

President

Robert Bandsma

President-elect

Stephen Allen

Secretary

Upcoming Annual Scientific Meeting 2024

ISPGHAN Annual Scientific Meeting 2024
(04-06 October)

NASPGHAN Annual Scientific Meeting 2024
(06-09 November)

WCPGHAN Annual Scientific Meeting 2024
(04-07 December)

WCPGHAN

Several Council members will be attending this important conference (https://wcpghan2024.org/) and we are keen to maximise CAPGAN's engagement.

We are keen to meet-up with you during the meeting and provide updates on various CAPGAN activities.

We have spoken to the organisers of the WCPGHAN regarding the subsidized rate for CAPGAN members from India, Pakistan, Bangladesh, Srilanka , Nepal and Africa.

Could you let us know if you are planning to attend?

If so, please e mail: capgan.info@gmail.com, ASAP please.

Hope to see you in Buenos Aires!

Upcoming Annual Scientific Meeting 2025

APGAN

Commonwealth Association of Paediatric Gastroenterology & Nutrition

CAPGAN

- The next CAPGAN biennial meeting will be a joint meeting with the Kenya Paediatric Association
- Provisionally, the CAPGAN meeting will be held during the week of April 7th 2025 at the White Sands Hotel, Mombasa
- Final details regarding registration and abstract submission will be given in the next eBulletin and posted to https://capgan.net/ in due course

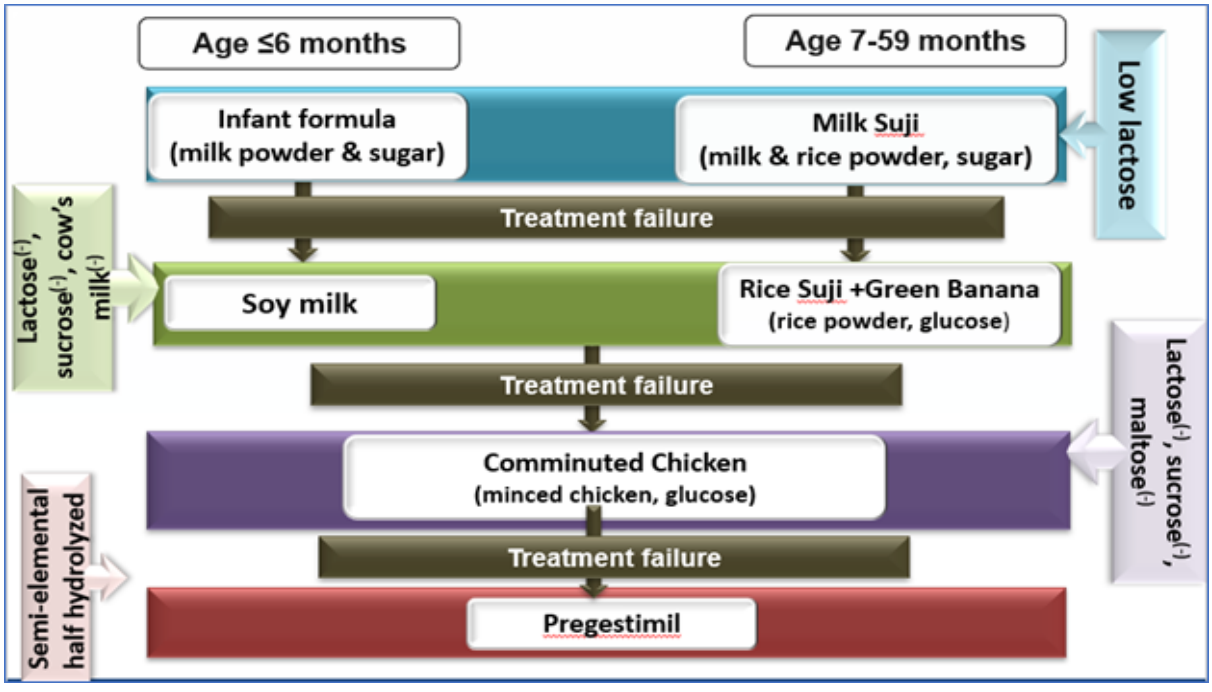
MANAGING PERSISTENT DIARRHEA IN RESOURCE-LIMITED SETTINGS:

Lubaba Shahrin, MBBS, FCPS (Pediatrics), Scientist, icddr,b

Background: Diarrhea is the second leading cause of death among children under five years old in low- and middle-income countries. In certain settings, 5%-10% of acute diarrheal episodes become persistent, elevating mortality risk. Persistent diarrhea causes 36-56% of all diarrheal deaths. Persistent diarrhea in children is typically defined as diarrhea that starts as an acute episode of presumably infectious cause and lasts for more than 14 days. This condition can have various underlying causes, including infections, malabsorption disorders, and chronic diseases. Children under five had a 6.4% prevalence of persistent diarrhea (1). A third experienced PD while in the hospital (2). Occurrence is highest (57%) among the 6–12 month age group (2). A quarter of those with PD were severely wasted. After the intervention, recuperation took 6 (3,9) days (3).

Management Approach: The mainstay of managing persistent diarrhea in children involves a multifaceted approach focusing on rehydration therapy, dietary management, micronutrient supplementation, antibiotics when necessary, and addressing underlying conditions. In unresolved cases dietary modification is advised as below.

Modification Dietary Algorithm at icddr,b



References:

1. *Mahfuz M, Alam MA, Islam SB, Naila NN, Chisti MJ, Alam NH, et al. Treatment outcome of children with persistent Diarrhoea admitted to an Urban Hospital, Dhaka during 2012–2013. BMC pediatrics. 2017;17:1-10.*
2. *Islam SB, Ahmed T, Mahfuz M, Mostafa I, Alam MA, Saqeeb KN, et al. The management of persistent diarrhoea at Dhaka Hospital of the International Centre for Diarrhoeal Disease and Research: a clinical chart review. Paediatrics and international child health. 2018;38(2):87-96.*
3. *Sarmin M, Hossain MI, Islam SB, Shikha SS, Alam NH, Sarker MSA, et al. Open-label, randomised controlled trial found that a green banana mixed rice suji diet was most effective for persistent diarrhoea in children in Bangladesh. Acta Paediatrica. 2023;112(8):1755-63.*

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Endoscopic management of ingested foreign bodies in children: A tertiary center experience in Bangladesh

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ABSTRACT

Aims

To examine the features of foreign body ingestion and evaluate the effectiveness of endoscopic therapy for foreign body ingestion in Bangladeshi children.

Methods

I retrospectively reviewed the medical records of 97 children diagnosed with foreign body ingestion that required endoscopic removal from 2016 to 2023.

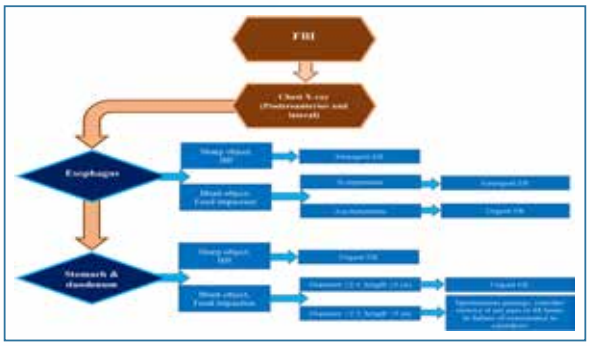


Fig. 1. *Management algorithm for foreign bodies in esophagus, stomach and duodenum*

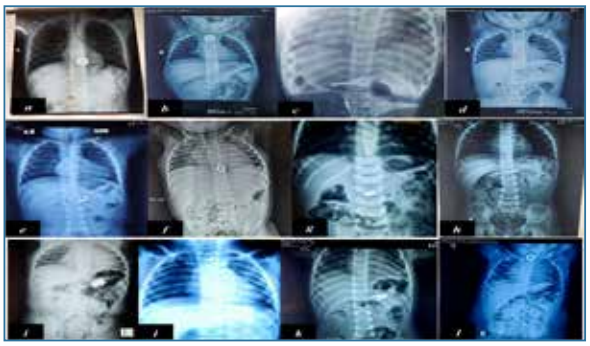


Fig. 2. *Radiology (Posteroanterior views): (a) Coin, (b) Button battery, (c) Key, (d) Finger ring, (e) Ear ring(i) (f) Ear ring (ii), (g) Hijab pin, (h) Iron nail, (i) Talisman, (j) Hair clip, (k) Metalic zipper puller, (l) Metalic washer*

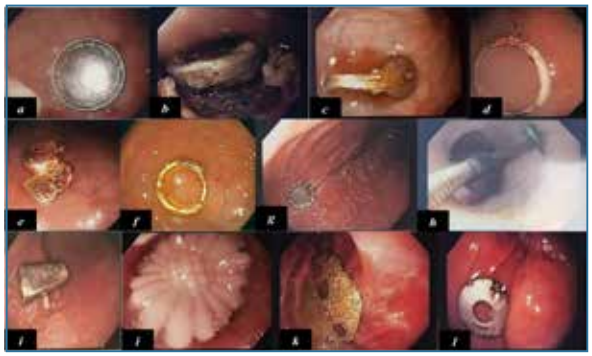


Fig. 3. *Endoscopic views: (a) Coin, (b) Button battery, (c) Key, (d) Finger ring (e) Ear ring(i) (f) Ear ring (ii), (g) Hijab pin, (h) Iron nail, (i) Talisman, (j) Hair clip, (k) Metalic zipper puller, (l) Metalic washer*

Fig. 4. *FB after removal: (a) Coin, (b) BB, (c) Key, (d) Finger ring (e) Ear ring(i) (f) Ear ring (ii), (g) Hijab pin , (h) Iron nail, (i) Talisman, (j) Hair clip, (k) Metalic zipper puller, (l) Metalic washer*

Results

The children were aged between 3 months and 15 years, with a mean age of 2.9±4.9 years, with more than 80% of the patients being under 5 years of age. Foreign body ingestion was observed at a high frequency (71.1%) in children aged one to five years.

Coins (67%) and button batteries (5.2%) were the most common foreign bodies swallowed by kids, and the majority of them were accidental (97.9%). The majority of the foreign bodies were blunt (74.3%), but some were sharp (18.6%). Fifty-six percent of esophageal foreign bodies and 94% of gastric foreign bodies were asymptomatic. Around 80% of button batteries and 77.8% of pointed objects were effectively removed from the body within 24 hours of ingestion. Similarly, food impaction and blunt objects (98.6% and 100%, respectively) were successfully removed after the 24-hour period. Endoscopic removal was successful in 99% of cases, with minimal complications. When button batteries and sharp objects were consumed, the severity of erythema, erosion, bleeding, and ulceration increased along with the length of impaction.

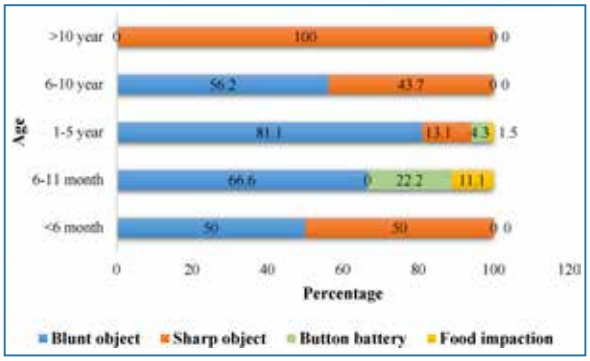


Fig. 5. The distribution of FB types varies with age.

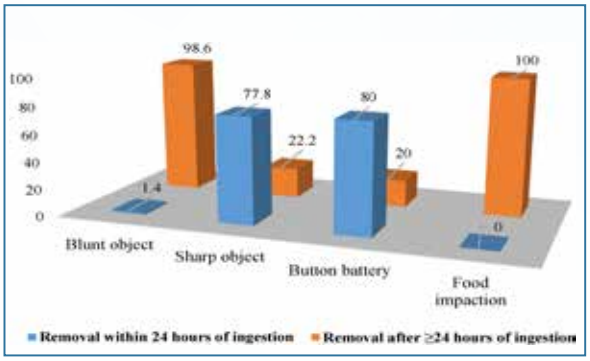


Fig. 6. Timing of FB removal after ingestion

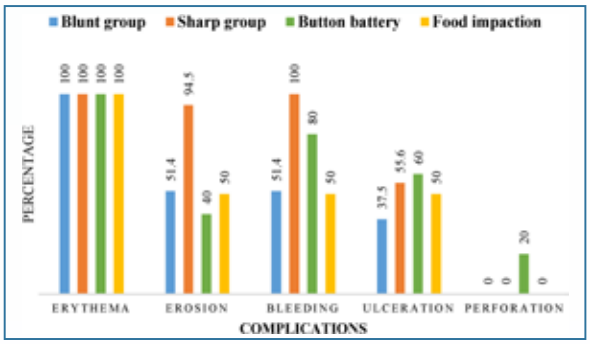


Fig. 7. Types of adverse events following FBI

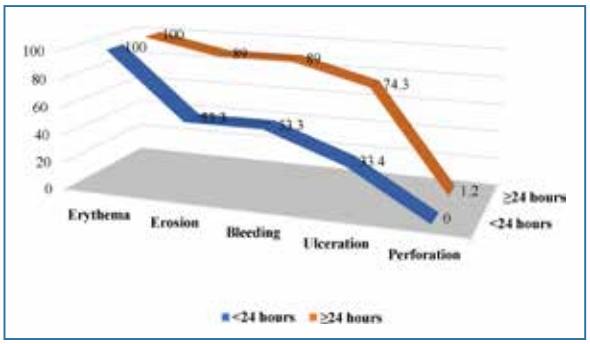


Fig. 8. Types of adverse events according to impaction time

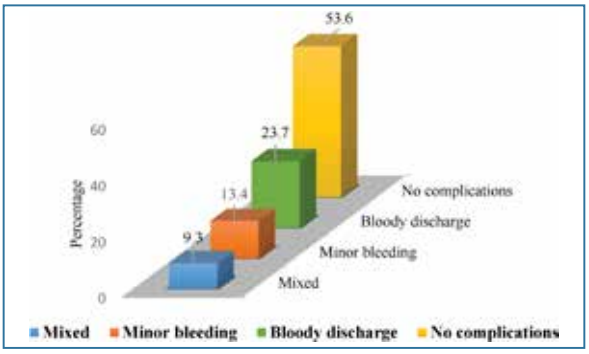


Fig. 9. Types of procedural complications

Conclusions

Foreign body ingestion is a frequent occurrence in children under the age of five. Coin was the most common foreign body, with the majority of asymptomatic presentations. Prompt identification and timely extraction of swallowed foreign bodies may improve clinical outcomes.

MPOX IN CHILDREN: A GLOBAL EMERGENCY

Salahuddin Mahmud, MD
Associate Professor, Department of Pediatric Gastroenterology
Bangladesh Shishu Hospital & Institute

What is this?

The monkeypox virus is an orthopoxvirus that causes mpox (monkeypox), a disease with symptoms similar to smallpox, although less severe.

Discovery and History

Monkeypox virus was discovered in 1958, when two outbreaks of a pox-like disease occurred in colonies of monkeys. Despite being named "monkeypox" originally, the source of the disease remains unknown. Scientists suspect African rodents and non-human primates (like monkeys) might harbor the virus and infect people. The first human case of mpox was recorded in 1970, in what is now the Democratic Republic of the Congo. In 2022, mpox spread around the world.

Virus types

There are two types of **Monkeypox** virus: clade I and clade II.

- **Clade I** causes more severe illness and deaths. Some outbreaks have killed up to 10% of the people who get sick, although more recent outbreaks have had lower death rates. Clade I is endemic to Central Africa.
- **Clade II** is the type that caused the global outbreak that began in 2022. Infections from clade II mpox are less severe. More than 99.9% of people survive. Clade II is endemic to West Africa.

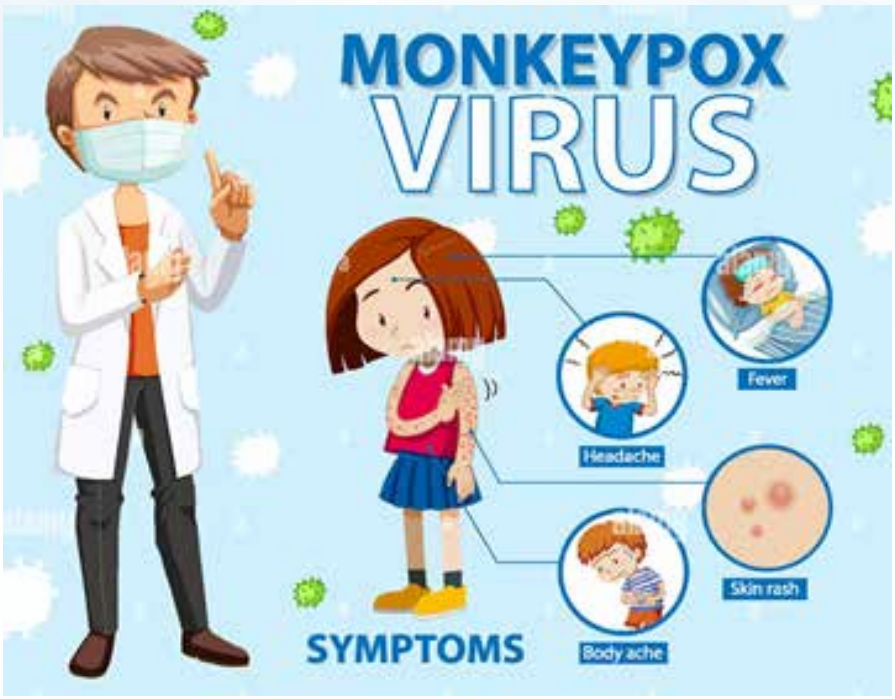
Incubation period

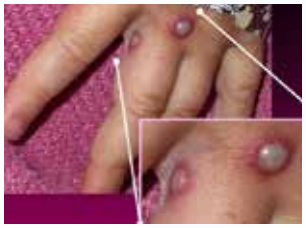
Transmission

- Direct contact with infected animals.
- Close contact (including intimate contact) with a person with mpox.
- Direct contact with contaminated materials.
- It can be transmitted through contact with bodily fluids, lesions on the skin or on internal mucosal surfaces, such as in the mouth or throat, respiratory droplets and contaminated objects.
- Transmission across the placenta in utero or contact during the birthing process.

Clinical Presentations

Similar to infections in adults, the most common sign of mpox in children and adolescents is a rash that progresses from maculopapular lesions to vesicles, pustules, and finally scabs. In a MMWR report, distribution of the rash in children was predominantly on the trunk and face; none of the children <12 years had anogenital lesions. In contrast, most adolescents presented with anogenital lesions. Historical reports of clade I or II MPXV infections in children and adolescents describe that the rash is often accompanied by fever, chills, sweats, lymphadenopathy, sore throat, headache, or myalgias. However, during the current outbreak, fever and lymphadenopathy have not always occurred. Other symptoms may include fatigue and headache. Difficulty swallowing or cough may occur when oropharyngeal lesions are present.





Five ways children are more at risk

1. Children are at higher risk than adults of contracting mpox - with 70% of DRC's 14,901 cases in children under 15 – and nearly four times more likely to die from mpox than adults. WHO data shows that the case fatality ratio for children under the age of one is 8.6%, compared to 2.4% in people aged 15 and over.

2. Transmission might be driven by children's weaker immune systems and/or the fact that children might have more physical contact interactions through play and at school.
3. Children may end up at higher risk due to the close resemblance of some of the signs and symptoms of mpox to other common childhood illnesses - such as scabies and chickenpox – leading to late recognition and treatment and delayed diagnosis and treatment.

4. Mpox causes fever, rash and lesions all over the body, severe headaches and fatigue. In severe cases, mpox can lead to sepsis, a life-threatening response to infection that requires immediate specialist medical attention. Some children also develop respiratory problems and have difficulty swallowing, and are at higher risk for secondary bacterial infections.

5. With just a few weeks before children in many countries across the world go back to school, lockdowns or school closures to curb the spread of the virus will have a hugely detrimental impact on children's learning. Earlier this week Save the Children said that newborn babies are contracting the virus in DRC's overcrowded hospitals.

Differential diagnosis

The rash of mpox may be confused with other rash illnesses that are commonly considered in children, including classic varicella (chickenpox) and varicella zoster (shingles); hand, foot, and mouth disease; measles; scabies; molluscum contagiosum; herpes; syphilis; allergic skin rashes; drug eruptions; and a variety of congenital infections.

Testing

The recommendations for testing for mpox are similar for children and adults. Tests should be performed on people for whom mpox is suspected based on clinical presentation and

epidemiologic criteria. Detection of viral DNA by polymerase chain reaction (PCR) is the preferred laboratory test for mpox. The best diagnostic specimens are taken directly from the rash – skin, fluid or crusts, or biopsy where feasible.

Treatments

As with adults, children and adolescents with mpox should be closely monitored throughout their illness and likely will benefit from supportive care and pain control. For the pediatric population, particular attention should be paid to keeping skin lesions covered and preventing children from scratching lesions or touching their eyes after touching lesions, which may result in auto-inoculation and more severe illness.

While most cases of mpox resolve without treatment, treatment should be considered based on interim guidance for clinical treatment for children and adolescents who have the following clinical manifestations: Severe disease, including disseminated rash, a large number of lesions that are confluent, hemorrhagic or necrotic lesions, severe lymphadenopathy that can cause airway obstruction, involvement of multiple organ systems and associated comorbidities.

Treatment should also be considered for children and adolescents who may be at high risk for severe disease:

- Children under 1 year of age
- Children and adolescents experiencing severe immunodeficiency or immunocompromise
- Adolescents who are pregnant or breastfeeding
- Children and adolescents with a condition affecting skin integrity

Tecovirimat

Tecovirimat is currently the first-line treatment for MPXV infection in people with severe disease or who are at risk for severe disease, including for children and adolescents. Oral tecovirimat dosing is most practical for children who weigh at least 13 kilograms (approximately 28 pounds), can take capsules or the contents of a capsule mixed with soft food, and are able to eat a fatty meal to ensure optimal drug absorption. In the absence of an oral tecovirimat suspension formulation, IV tecovirimat may be considered for children weighing less than 13 kilograms based on clinical assessment of risk/benefit and if determined appropriate by the treating clinician.

The use of the antiviral medications brincidofovir and cidofovir may also be considered, but these should be used with caution due to potential toxicity.

Post-exposure prophylaxis

The only vaccine that is authorized and recommended for use in children or adolescents for PEP is the JYNNEOS vaccine. Vaccination with JYNNEOS for children and adolescents aged <18 years should be administered via subcutaneous injection as two doses (0.5mL each) given four weeks apart, ideally with the first dose given within four days of exposure. Adolescents at risk for mpox may receive the JYNNEOS vaccine before an exposure.

Prevention

Prevention and control of mpox rely on raising awareness in communities and educating health workers to prevent infection and stop transmission. Close contact with infected people or contaminated materials should be avoided. Gloves and other personal protective clothing and equipment should be worn while taking care of the sick, whether in a health facility or in the home.

Special situations

Breastfeeding a child who has mpox

Decisions about whether an infant or child with mpox may directly breastfeed from an uninfected caregiver should be considered on a case-by-case basis. PEP with the JYNNEOS vaccine should be considered for the uninfected caregiver.

Neonates born to individuals with suspected, probable, or confirmed mpox

Early bathing is recommended for neonates born to individuals with suspected, probable, or confirmed mpox. Bathing can be performed using soap and water and should occur prior to the neonate receiving procedures, vaccines, and medications (e.g., Vitamin K). PEP should be considered for neonates born to individuals with suspected, probable, or confirmed mpox. The specific therapeutic that is administered should be determined after consultation with public health authorities.

CDC August 2024
WHO August 2024

CAPGAN Webinars

We are delighted that Lindo Radebe & Michele Zuckerman, leads for Training and Continual Professional Development, have re-launched the webinar series.

The webinars are a forum for members to discuss state-of-the-art clinical practice and latest research findings especially as relevant to the context of lower-resource health care settings.

Webinars are held on the last Monday of every 2nd month beginning at 12.00 GMT

A summary of the recent "Managing persistent diarrhoea in resource-limited settings" webinar by Lubaba Shahrin is included in this eBulletin.

Upcoming webinars:

1. Acute liver failure: Dr Neelam Mohan; 30 September 2024

2. CMV and EBV infection in paediatric liver transplantation: Dr Priya Walabh; 25 November 2024

This forum is open to all CAPGAN members and we are particularly keen to hear from colleagues regarding delivering effective health care and undertaking research despite the constraints of lower-resource settings. If you may be interested to present at one of the webinars, please contact Lindo (owami123@gmail.com) or Michelle (mzuckermansa@gmail.com).

Website address

Make sure that you keep-up with latest news and developments by checking the website: https://capgan.net/