



Deworming therapy with respect to Parasitic Locomotion

N, Dinesh (Contact person)^{1, 2} ; MJ, Venkatesan (Producer)^{3, 1, 2} 

Hide affiliations

1.  International Association of Engineers
2.  Ministry of Micro, Small and Medium Enterprises
3.  University of Messina

Precautions When Consuming Anthelmintic Drugs are discussed below.

General Precautions

- 1) Follow doctor's instructions: Take the medication exactly as prescribed by your doctor.
- 2) Complete the full course: Finish the entire course of treatment, even if you start feeling better before completing it.
- 3) Dosage and administration: Follow the recommended dosage and administration instructions.

Specific Precautions

- 1) Pregnancy and breastfeeding: Consult your doctor before taking anthelmintic drugs during pregnancy or breastfeeding.
- 2) Allergies and sensitivities: Inform your doctor about any allergies or sensitivities you have.
- 3) Interactions with other medications: Inform your doctor about any other medications you're taking.

Monitoring and Side Effects

- 1) Monitor side effects: Be aware of potential side effects, such as nausea, vomiting, or diarrhea.
- 2) Report adverse reactions: Inform your doctor if you experience any severe or persistent side effects.

Additional Considerations

- 1) Hygiene and sanitation: Maintain good hygiene and sanitation practices to prevent re-infection.
- 2) Follow-up treatment: Schedule follow-up appointments with your doctor to ensure the infection has been fully treated.

By taking these precautions, we can ensure safe and effective treatment with anthelmintic drugs.

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Anthelmintics

1 message

Venkatesan <venkat197171@gmail.com>

To: nirmala52@yahoo.co.in

Sun, Oct 27, 2024 at 11:27 PM

Title: Deworming therapy with respect to Parasitic locomotion.

Description:

Deworming therapy aims to eliminate intestinal parasites (worms) from the body.

Types of Deworming Therapy:

1. Anthelmintic medications

2. Herbal remedies

3. Ayurvedic treatments

4. Homeopathic therapies

Common Anthelmintic Medications:

1. Albendazole (Zentel)

2. Mebendazole (Vermox)

3. Ivermectin (Stromectol)

4. Praziquantel (Biltricide)

5. Pyrantel (Combantrin)

Herbal Deworming Remedies:

1. Wormwood (Artemisia absinthium)

2. Black Walnut (Juglans nigra)

3. Cloves (Syzygium aromaticum)

4. Turmeric (Curcuma longa)

5. Garlic (Allium sativum)

Ayurvedic Deworming Treatments:

1. Vidanga (Embelia ribes)

2. Krimikuthar Ras

3. Soolantra Vati

4. Panchakarma detoxification

5. Rasayana therapy

Homeopathic Deworming Therapies:

1. Cina

2. Teucrium

3. Filix mas

4. Calcarea carbonica

5. Natrum muriaticum

Deworming Protocols:

1. Single-dose treatment

2. Course of treatment (3-7 days)

3. Repeat treatment (after 2-3 weeks)

Precautions and Contraindications:

1. Pregnancy and breastfeeding

2. Allergic reactions

3. Interactions with other medications

4. Severe intestinal obstruction

5. Weakened immune system

Dietary Recommendations:

1. Increase fiber intake

2. Eat pumpkin seeds

3. Consume probiotics

4. Avoid sugary and processed foods

5. Stay hydrated

Follow-up and Monitoring:

1. Stool tests

2. Blood tests (for severe infections)

3. Monitor for side effects

4. Adjust treatment as needed

Prevention Strategies:

1. Practice good hygiene

2. Wash hands regularly

3. Avoid contaminated food and water

4. Use proper sanitation facilities

5. Regular deworming check-ups

Parasitic locomotion:

Parasitic locomotion refers to the various methods parasites use to move and migrate within their hosts or environments. Here are some key aspects and examples:

Types of Parasitic Locomotion:

1. Amoeboid Movement (e.g., Amoeba proteus, Giardia)

- Pseudopodia extension and retraction

- Cell membrane flows forward, allowing parasite to move

2. Flagellar Movement (e.g., Trypanosoma, Trichomonas vaginalis)

- Whip-like flagella propel parasite through fluids

3. Ciliary Movement (e.g., Balantidium coli)

- Coordinated cilia movement creates currents for propulsion

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- 3. Ayurvedic treatments
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- 1. Vidanga (Embelia ribes)
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Deworming Protocols:

- 1. Single-dose treatment
- 2. Course of treatment (3-7 days)
- 3. Repeat treatment (after 2-3 weeks)

Precautions and Contraindications:

- 1. Pregnancy and breastfeeding
- 2. Allergic reactions
- 3. Interactions with other medications
- 4. Severe intestinal obstruction
- 5. Weakened immune system

Dietary Recommendations:

1. Increase fiber intake
2. Eat pumpkin seeds
3. Consume probiotics
4. Avoid sugary and processed foods
5. Stay hydrated

Follow-up and Monitoring:

1. Stool tests
2. Blood tests (for severe infections)
3. Monitor for side effects
4. Adjust treatment as needed

Prevention Strategies:

1. Practice good hygiene
2. Wash hands regularly
3. Avoid contaminated food and water
4. Use proper sanitation facilities
5. Regular deworming check-ups

Parasitic locomotion:

Parasitic locomotion refers to the various methods parasites use to move and migrate within their hosts or environments. Here are some key aspects and examples:

Types of Parasitic Locomotion:

1. Amoeboid Movement (e.g., *Amoeba proteus*, *Giardia*)
 - Pseudopodia extension and retraction
 - Cell membrane flows forward, allowing parasite to move
2. Flagellar Movement (e.g., *Trypanosoma*, *Trichomonas vaginalis*)
 - Whip-like flagella propel parasite through fluids
3. Ciliary Movement (e.g., *Balantidium coli*)
 - Coordinated cilia movement creates currents for propulsion
4. Muscular Movement (e.g., Hookworms)
 - Contracting and relaxing muscles facilitate movement
5. Body Undulation (e.g., Tapeworms, Roundworms)
 - Wave-like movements propel parasite through host's intestines

Mechanisms:

1. Adhesion (e.g., hookworms, tapeworms)
 - Parasites attach to host tissues for stability and movement
2. Chemotaxis (e.g., malaria parasites)
 - Parasites move towards chemical gradients (e.g., nutrients, host signals)
3. Host-Parasite Interaction (e.g., *Toxoplasma gondii*)
 - Parasites manipulate host cells to facilitate movement

Environmental Adaptations:

1. Aquatic environments (e.g., fish parasites)
 - Flagella or cilia adapted for water currents
2. Viscous environments (e.g., mucus, tissue)
 - Amoeboid or muscular movement more effective

Importance:

1. Pathogenesis (disease development)
2. Host-parasite interactions

3. Vaccine and drug development

4. Understanding parasite evolution and adaptation

Examples of Parasites:

1. Plasmodium (malaria)
2. Toxoplasma gondii (toxoplasmosis)
3. Trypanosoma brucei (sleeping sickness)
4. Giardia lamblia (giardiasis)
5. Schistosoma mansoni (schistosomiasis)

Studying parasitic locomotion helps uncover the intricate relationships between parasites and their hosts, informing strategies for disease prevention and treatment.

Locomotion of Parasites:

Locomotion in parasites refers to the various methods parasites use to move and migrate within their hosts or environments to find food, escape predators, or reach new locations for reproduction. Different parasites have evolved unique mechanisms of locomotion adapted to their specific environments and life cycles. Here are some common methods of locomotion used by parasites:

1. ***Amoeboid Movement***: Some protozoan parasites, such as amoebas and Giardia, use amoeboid movement. This involves extending parts of their cell (pseudopodia) to pull themselves forward.
2. ***Flagella***: Flagellated parasites like Trypanosoma (which causes sleeping sickness) and Trichomonas vaginalis (which causes trichomoniasis) use their flagella (whip-like structures) to propel themselves through fluids.
3. ***Cilia***: Ciliated parasites, such as ciliates like Balantidium coli, use coordinated movements of their cilia (short, hair-like structures) to move.
4. ***Muscular Movement***: Some parasitic worms (helminths) have muscles that enable movement. For example, hookworms use their mouthparts to anchor themselves to the intestinal wall and then contract and relax their muscles to pull themselves forward.
5. ***Body Undulation***: Larger parasitic worms, such as tapeworms and roundworms, move through their hosts' intestines by undulating their bodies.
6. ***Host-Parasite Interaction***: Some parasites manipulate their hosts to facilitate their own movement. For instance, certain parasites can induce changes in their host's behavior or physiology to help them complete their life cycle.

Understanding how parasites move is crucial for developing strategies to combat parasitic infections and diseases. It also sheds light on the fascinating adaptations parasites have evolved to thrive in various environments.

Differential Diagnosis & Clinical Diagnosis:

Prescribing anthelmintics requires careful consideration of several factors, including:

1. Diagnosis: Confirm the presence of a parasitic infection through:

- Stool tests (e.g., microscopy, PCR)
- Blood tests (e.g., serology, PCR)
- Imaging studies (e.g., X-rays, CT scans)
- Physical examination and medical history

2. Parasite identification: Determine the type of parasite causing the infection.

3. Patient factors:

- Age
- Weight
- Pregnancy or lactation status
- Renal or hepatic impairment
- Allergies or sensitivities
- Concomitant medications

4. Anthelmintic selection: Choose an appropriate anthelmintic based on:

- Parasite susceptibility
- Efficacy and safety profile
- Route of administration (oral, topical, injectable)
- Dosage and duration of treatment

Common Anthelmintics and Dosages:

1. *Albendazole (Albenza)*:
 - Adult dose: 400 mg orally once or twice daily for 1-3 days
 - Pediatric dose: 10-20 mg/kg orally once or twice daily for 1-3 days
2. *Ivermectin (Stromectol)*:
 - Adult dose: 200 mcg/kg orally once or twice daily for 1-2 days
 - Pediatric dose: 150-200 mcg/kg orally once or twice daily for 1-2 days
3. *Mebendazole (Vermox)*:
 - Adult dose: 100 mg orally twice daily for 3 days
 - Pediatric dose: 10-20 mg/kg orally twice daily for 3 days
4. *Pyrantel (Strongid)*:
 - Adult dose: 11 mg/kg orally once daily for 1 day
 - Pediatric dose: 11 mg/kg orally once daily for 1 day

Prescription Guidelines:

1. Consider contraindications and potential interactions.
2. Monitor for adverse effects (e.g., gastrointestinal upset, headache).
3. Provide patient education on medication use and potential side effects.
4. Follow-up appointments to assess treatment efficacy and potential need for retreatment.

Special Considerations:

1. Pregnancy and lactation: Use anthelmintics with caution and only when benefits outweigh risks.
2. Renal or hepatic impairment: Adjust dosages or choose alternative treatments.
3. Concomitant medications: Monitor for potential interactions.

Preparation of patient for deworming treatment:

Sedative drugs are sometimes administered prior to anthelmintic drugs in certain situations, particularly in veterinary medicine. Here's why:

Reasons for using sedatives before anthelmintics:

1. *Reducing stress and anxiety*: Anthelmintic treatments can be stressful for animals, especially if they require handling, restraint, or administration of medication via injection or orally. Sedatives help calm the animal, making the treatment process easier and less traumatic.
2. *Facilitating administration*: Sedation can make it easier to administer anthelmintic medications, especially if the animal is fractious or difficult to handle.
3. *Preventing adverse reactions*: Some anthelmintics can cause adverse reactions, such as nausea, vomiting, or excitement. Sedatives can help mitigate these effects.
4. *Ensuring compliance*: Sedation can help ensure that the animal remains still and cooperative during treatment, increasing the likelihood of successful administration.

Common sedatives used:

1. Acepromazine
2. Midazolam
3. Diazepam
4. Xylazine (in veterinary medicine)

Specific situations where sedatives are used before anthelmintics:

1. *Equine deworming*: Sedatives are often used to calm horses before administering anthelmintic medications.
2. *Livestock treatments*: Sedatives may be used to facilitate handling and treatment of livestock, such as cattle or pigs.
3. *Small animal treatments*: Sedatives may be used in small animals, like dogs or cats, if they are particularly anxious or fractious.

Important considerations:

1. *Veterinary guidance*: Sedatives should only be administered under the guidance of a veterinarian.
2. *Dosage and selection*: The type and dosage of sedative should be carefully selected based on the animal's species, size, age, and health status.
3. *Monitoring*: Animals should be closely monitored during sedation and treatment.

In human medicine, sedatives are not typically administered before anthelmintic treatment, as the treatments are usually oral and well-tolerated.

Pharmacology of Anthelmintic drugs:

Anthelmintic drugs, also known as anti-parasitic drugs, are designed to treat parasitic infections by targeting and eliminating parasites from the body.

When an anthelmintic drug is administered, its effectiveness in preventing parasite penetration into the bloodstream depends on several factors:

Factors influencing parasite penetration:

1. ***Type of parasite*:** Different parasites have varying abilities to penetrate tissues and enter the bloodstream.
2. ***Drug mechanism of action*:** Anthelmintic drugs work through various mechanisms, such as disrupting parasite membranes, interfering with metabolic processes, or blocking neurotransmitters.
3. ***Drug dosage and administration*:** The timing, dosage, and route of administration (e.g., oral, topical, or injectable) impact the drug's effectiveness.
4. ***Parasite location and stage*:** Parasites in different stages (e.g., eggs, larvae, adults) or locations (e.g., intestinal lumen, tissues) may respond differently to treatment.

General effects of anthelmintic drugs:

Anthelmintic drugs can:

1. ***Kill or incapacitate parasites*:** Preventing them from penetrating the bloodstream.
2. ***Expel parasites*:** Forcing them out of the body, typically through stool or vomit.
3. ***Inhibit parasite growth*:** Preventing further development and reproduction.

Common anthelmintic drugs and their effects:

1. **Albendazole** (e.g., for hookworm, roundworm): Interferes with parasite glucose uptake, depleting energy stores.
2. **Ivermectin** (e.g., for river blindness, lymphatic filariasis): Activates chloride channels, paralyzing parasites.
3. **Praziquantel** (e.g., for schistosomiasis, liver fluke): Causes parasite muscle contractions, leading to expulsion.

Anthelmintic drugs are designed to target and eliminate parasites, preventing them from penetrating the bloodstream. However, the effectiveness of these drugs depends on various factors, including the type of parasite, drug mechanism, dosage, and administration.

Penetrating power of parasites:

Some parasites can penetrate the intestinal wall, leading to various health complications. Here are some examples:

Types of parasites that can penetrate the intestinal wall:

1. **Hookworms** (*Ancylostoma duodenale* and *Necator americanus*): Their larvae can penetrate the intestinal wall and migrate to the lungs.
2. **Roundworms** (*Toxocara cati* and *Toxocara canis*): Larvae can penetrate the intestinal wall and migrate to other organs.
3. **Tapeworms** (*Taenia saginata* and *Taenia solium*): Larvae (cysticerci) can penetrate the intestinal wall and form cysts in muscles and other tissues.
4. **Giardia lamblia**: This protozoan parasite can adhere to and penetrate the intestinal lining.
5. **Entamoeba histolytica**: This protozoan parasite can penetrate the intestinal wall, causing amoebic dysentery.

Consequences of parasites penetrating the intestinal wall:

1. Inflammation and damage to surrounding tissues.
2. Malabsorption of nutrients.
3. Intestinal perforation (rare).
4. Migration to other organs (e.g., lungs, liver, brain).
5. Increased risk of secondary infections.

Symptoms may include:

1. Abdominal pain.
2. Diarrhea or bloody stools..
3. Weight loss.
4. Fatigue.
5. Nausea and vomiting.

Treatment and prevention:

1. Anti-parasitic medications.
2. Improved hygiene and sanitation.
3. Proper food handling and cooking.
4. Avoiding contaminated water and food.
5. Regular stool testing and medical check-ups.

Induction of sedation:

While sedative drugs can help manage symptoms, they aren't typically used to paralyze or treat parasitic infections. Instead, anti-parasitic medications are specifically designed to target and eliminate parasites.

Why sedatives aren't ideal:

1. Sedatives don't target parasites directly.
2. Parasites may develop resistance.
3. Sedatives can mask symptoms, delaying proper diagnosis.
4. Underlying infection remains untreated.

Anti-parasitic medications:

1. Albendazole (e.g., for hookworm, roundworm, tapeworm)
2. Metronidazole (e.g., for Giardia, Entamoeba)
3. Praziquantel (e.g., for tapeworm, schistosomiasis)
4. Ivermectin (e.g., for Strongyloides, onchocerciasis)

Treatment goals:

1. Eliminate parasites.
2. Reduce symptoms.
3. Prevent complications.

Supportive care:

1. Fluid replacement.
2. Electrolyte balance.
3. Rest.
4. Nutritional support.

When to seek medical attention:

1. Severe symptoms.
2. Blood in stool.
3. Fever.
4. Vomiting.
5. Abdominal pain.

Importance of Parasitic sedation:

Sedating intestinal parasites is not a conventional medical approach. Instead, anti-parasitic medications are used to eliminate parasites. However, some natural compounds and herbs have sedative or calming effects on parasites, which may alleviate symptoms:

Natural sedative compounds:

1. Papain (from papaya): Digestive enzyme that can help reduce parasite activity.
2. Garlic: Antiparasitic and calming properties.
3. Turmeric (curcumin): Anti-inflammatory and antioxidant effects.
4. Ginger: Anti-inflammatory and soothing properties.
5. Black walnut: Antiparasitic properties.

Herbal remedies:

1. Wormwood (*Artemisia absinthium*): Antiparasitic properties.
2. Black seed (*Nigella sativa*): Antiparasitic and anti-inflammatory effects.
3. Triphala: Ayurvedic blend to calm digestive system.

Important notes:

1. Consult a healthcare professional before using natural remedies.
2. These compounds may not eliminate parasites.
3. Anti-parasitic medications are often necessary.

Conventional medical treatment:

1. Albendazole (e.g., for hookworm, roundworm, tapeworm)
2. Metronidazole (e.g., for Giardia, Entamoeba)

3. Praziquantel (e.g., for tapeworm, schistosomiasis)
4. Ivermectin (e.g., for Strongyloides, onchocerciasis)

Dietary changes:

1. Increase fiber intake.
2. Eat probiotic-rich foods (yogurt, kefir).
3. Avoid sugary and processed foods.

Prevention:

1. Practice good hygiene.
2. Wash hands regularly.
3. Avoid contaminated water and food.

Remember, natural remedies should supplement, not replace, conventional medical treatment. Consult a healthcare professional for personalized guidance.

Is sedative drugs retard the movement of parasite ?

Sedative drugs are not typically used to treat parasitic infections, as they don't target the parasite directly. However, some sedatives may indirectly affect parasite movement:

Mechanisms:

1. Muscle relaxation: Sedatives can relax muscles, potentially reducing parasite movement.
2. Decreased intestinal motility: Sedatives can slow intestinal movement, possibly limiting parasite migration.

Examples of sedatives with potential effects on parasites:

1. Benzodiazepines (e.g., diazepam): May relax muscles and reduce parasite movement.
2. Barbiturates (e.g., phenobarbital): Can decrease intestinal motility.
3. Antihistamines (e.g., diphenhydramine): May have sedative and antispasmodic effects.

Limitations and concerns:

1. Sedatives don't eliminate parasites.
2. Parasites may develop resistance.
3. Sedatives can mask symptoms, delaying proper diagnosis.
4. Underlying infection remains untreated.

Anti-parasitic medications are still necessary:

1. Albendazole (e.g., for hookworm, roundworm, tapeworm)
2. Metronidazole (e.g., for Giardia, Entamoeba)
3. Praziquantel (e.g., for tapeworm, schistosomiasis)
4. Ivermectin (e.g., for Strongyloides, onchocerciasis)

Reducing the activity of parasites:

Slowing down intestinal parasite movement can alleviate symptoms and support treatment. Here are some natural and medical approaches:

Natural Methods:

1. Dietary changes: Eat fiber-rich foods, probiotics (yogurt, kefir), and antioxidant-rich foods (fruits, vegetables).
2. Herbal remedies: Garlic, ginger, turmeric (curcumin), wormwood (Artemisia absinthium), and black walnut.
3. Digestive enzymes: Papain (papaya), bromelain (pineapple).
4. Probiotics: Support gut health, reduce parasite load.

Medical Treatment:

1. Anti-parasitic medications: Albendazole, Metronidazole, Praziquantel, Ivermectin.
2. Antispasmodics: Dicyclomine, hyoscyamine (for intestinal cramps).
3. Anti-diarrheal medications: Loperamide.

Supplements:

1. Omega-3 fatty acids (anti-inflammatory).
2. Vitamin C (antioxidant).

3. Zinc (immune system support).
4. Berberine (antiparasitic, antibacterial).

Lifestyle Changes:

1. Hydration: Drink plenty of water.
2. Rest: Adequate sleep.
3. Stress management: Yoga, meditation.
4. Avoid: Sugary, processed foods.

Important Notes:

1. Consult a healthcare professional before using natural remedies or supplements.
2. Medical treatment is necessary for effective parasite elimination.
3. Combination therapy may be recommended.

Parasite-Specific Slowdown Strategies:

1. Giardia: Berberine, garlic, and wormwood.
2. Hookworm: Papain, garlic, and turmeric.
3. Tapeworm: Praziquantel, pumpkin seeds, and papaya.

Hidden parasites:

Some parasites are resistant or can evade elimination when treated with anthelmintics (anti-parasitic medications). Here are examples:

Resistant Parasites:

1. Hookworms (*Ancylostoma duodenale*, *Necator americanus*): Developing resistance to albendazole and mebendazole.
2. Roundworms (*Toxocara* spp.): Showing resistance to albendazole and ivermectin.
3. Whipworms (*Trichuris trichiura*): Resistant to albendazole, mebendazole, and ivermectin.
4. Tapeworms (*Taenia saginata*, *Taenia solium*): Developing resistance to praziquantel.

Evasive Parasites:

1. Giardia lamblia: Can encyst and evade treatment, requiring multiple courses.
2. Cryptosporidium spp.: Difficult to eliminate, especially in immunocompromised individuals.
3. Entamoeba histolytica: Can form cysts, making treatment challenging.
4. Cyst-forming parasites (e.g., Echinococcus granulosus): Require prolonged treatment.

Reasons for Treatment Failure:

1. Inadequate dosing or duration.
2. Poor absorption or bioavailability.
3. Parasite genetic mutations.
4. Concurrent infections.
5. Weakened immune system.

Alternative Treatment Approaches:

1. Combination therapy (e.g., albendazole + ivermectin).
2. Increased treatment duration.
3. Higher doses.
4. Natural compounds (e.g., berberine, curcumin).
5. Immunomodulatory therapy.

Hidden place for parasite:

Some parasites can indeed penetrate the intestinal wall and enter the bloodstream, causing systemic infections. Here are examples:

Bloodstream-Invasive Parasites:

1. Hookworms (*Ancylostoma duodenale*, *Necator americanus*): Penetrate intestinal wall, enter bloodstream, and migrate to lungs.
2. Roundworms (*Toxocara* spp.): Invade intestinal wall, enter bloodstream, and migrate to various organs.
3. Strongyloides stercoralis: Enter intestinal wall, bloodstream, and lungs.
4. Schistosomes (*Schistosoma* spp.): Penetrate skin, enter bloodstream, and migrate to intestines, liver, or bladder.
5. Malaria parasites (*Plasmodium* spp.): Infect red blood cells after entering bloodstream through mosquito bites.

Mechanisms of Invasion:

1. Active penetration: Hookworms, Strongyloides.
2. Passive uptake: Schistosomes (via skin).
3. Phagocytosis evasion: Toxocara (avoid immune response).

Symptoms of Bloodstream Invasion:

1. Fever
2. Fatigue
3. Weight loss
4. Abdominal pain
5. Diarrhea
6. Nausea/vomiting
7. Cough (lung migration)
8. Skin lesions (schistosomiasis)

Diagnostic Tests:

1. Blood tests (serology, PCR)
2. Stool exams (ova/parasite detection)
3. Imaging studies (ultrasound, CT scans)
4. Endoscopy/biopsy

Treatment:

1. Anthelmintics (e.g., albendazole, ivermectin)
2. Antimalarials (e.g., chloroquine, artemisinin)
3. Supportive care (hydration, nutrition)
4. Surgery (in severe cases)

Prevention Strategies:

1. Proper hygiene
2. Clean water sources
3. Cooked food
4. Avoid contaminated soil/sand
5. Wear protective clothing
6. Regular deworming (in endemic areas)

Fortification of intestine:

Preventing parasite penetration into the intestinal cell wall involves a combination of dietary, lifestyle, and supplement strategies. Here are some ways to fortify your intestinal barrier:

Dietary Changes:

1. Increase omega-3 fatty acids (anti-inflammatory): Fatty fish, flaxseeds, chia seeds.
2. Consume fiber-rich foods (prebiotics): Fruits, vegetables, whole grains.
3. Eat fermented foods (probiotics): Yogurt, kefir, kimchi, sauerkraut.
4. Include antioxidant-rich foods: Berries, leafy greens, nuts.
5. Avoid: Sugary, processed, and high-salt foods.

Supplements:

1. Probiotics (e.g., Lactobacillus, Bifidobacterium): Support gut flora.
2. Prebiotic fibers (e.g., inulin, pectin): Feed beneficial bacteria.
3. Omega-3 fatty acids (EPA, DHA): Reduce inflammation.
4. Vitamin D: Maintain intestinal barrier integrity.
5. Zinc: Essential for gut health and immune function.
6. Berberine: Antiparasitic and anti-inflammatory properties.

Lifestyle Changes:

1. Stay hydrated: Adequate water intake.
2. Exercise regularly: Improve gut motility.
3. Manage stress: Yoga, meditation, deep breathing.
4. Get enough sleep: 7-8 hours/night.
5. Avoid antibiotics unless necessary.

Intestinal Barrier Support:

1. L-Glutamine: Amino acid for gut lining repair.
2. Slippery elm: Soothes and protects mucous membranes.
3. Marshmallow root: Supports gut lining integrity.
4. Licorice root: Anti-inflammatory, soothes gut lining.

Parasite-Specific Prevention:

1. Hookworms: Wear shoes, avoid contaminated soil.
2. Giardia: Filter water, avoid raw/undercooked food.
3. Cryptosporidium: Avoid contaminated water, raw/undercooked food.

Herbal Remedies:

1. Garlic: Antiparasitic, antibacterial.
2. Turmeric (curcumin): Anti-inflammatory, antiparasitic.
3. Ginger: Anti-inflammatory, antioxidant.
4. Black walnut: Antiparasitic, antibacterial.

Importance of sedation:

Preventing parasite penetration into the intestinal cell wall involves a combination of dietary, lifestyle, and supplement strategies. Here are some ways to fortify your intestinal barrier:

Dietary Changes:

1. Increase omega-3 fatty acids (anti-inflammatory): Fatty fish, flaxseeds, chia seeds.
2. Consume fiber-rich foods (prebiotics): Fruits, vegetables, whole grains.
3. Eat fermented foods (probiotics): Yogurt, kefir, kimchi, sauerkraut.
4. Include antioxidant-rich foods: Berries, leafy greens, nuts.
5. Avoid: Sugary, processed, and high-salt foods.

Supplements:

1. Probiotics (e.g., Lactobacillus, Bifidobacterium): Support gut flora.
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Sedatives for parasites:

Here are some drugs that can sedate or reduce the activity of intestinal parasites:

Antiparasitic Drugs:

1. Albendazole (Albenza): Effective against hookworms, roundworms, and tapeworms.
2. Mebendazole (Vermox): Targets hookworms, roundworms, and whipworms.
3. Praziquantel (Biltricide): Effective against tapeworms, hookworms, and flukes.
4. Ivermectin (Stromectol): Treats strongyloidiasis, onchocerciasis, and lymphatic filariasis.
5. Metronidazole (Flagyl): Effective against Giardia, Entamoeba histolytica, and Trichomonas vaginalis.

Sedating/Antispasmodic Drugs:

1. Dicyclomine (Bentyl): Relaxes intestinal muscles, reducing cramps and spasms.
2. Hyoscyamine (Levsin): Antispasmodic, reducing intestinal cramps and spasms.
3. Loperamide (Imodium): Slows intestinal movement, relieving diarrhea.

Natural Sedatives:

1. Papain (papaya extract): Digestive enzyme, anti-inflammatory.
2. Garlic: Antiparasitic, antibacterial, antispasmodic.
3. Ginger: Anti-inflammatory, antioxidant, antispasmodic.
4. Turmeric (curcumin): Anti-inflammatory, antioxidant, antiparasitic.
5. Berberine: Antiparasitic, antibacterial, antispasmodic.

Combination Therapies:

1. Albendazole + Ivermectin: Effective against multiple parasites.
2. Metronidazole + Albendazole: Treats giardiasis and other parasitic infections.

Important Notes:

1. Consult a healthcare professional before using any medication.
2. Dosage and duration vary depending on parasite type and individual needs.
3. Combination therapy may be necessary for effective treatment.
4. Natural sedatives should not replace medical treatment.

Traditional antiparasitics:

Here are some herbal antiparasitics:

Anti-Protozoal Herbs:

1. Garlic (*Allium sativum*): Antiparasitic, antibacterial, antiviral.
2. Turmeric (*Curcuma longa*): Curcumin has anti-plasmodial, anti-amoebic properties.
3. Ginger (*Zingiber officinale*): Anti-inflammatory, antioxidant, antiparasitic.
4. Black walnut (*Juglans nigra*): Juglone kills parasites, including Giardia.
5. Goldenseal (*Hydrastis canadensis*): Berberine has anti-protozoal properties.

Anti-Helminthic Herbs:

1. Wormwood (*Artemisia absinthium*): Sesquiterpene lactones kill parasites.
2. Black pepper (*Piper nigrum*): Piperine has anti-helminthic properties.
3. Pumpkin seed (*Cucurbita pepo*): Cucurbitin kills tapeworms.
4. Papaya (*Carica papaya*): Papain digests parasite proteins.
5. Neem (*Azadirachta indica*): Azadirachtin disrupts parasite life cycles.

Anti-Nematode Herbs:

1. Andrographis (*Andrographis paniculata*): Andrographolides kill nematodes.
2. Ashwagandha (*Withania somnifera*): Withanolides have anti-nematode properties.
3. Triphala (*Amalaki*, *Haritaki*, *Bibhitaki*): Antiparasitic, antioxidant.

Other Herbal Antiparasitics:

1. Olive leaf (*Olea europaea*): Oleuropein has anti-parasitic properties.
2. Grapefruit seed (*Citrus paradisi*): Polyphenols kill parasites.
3. Pomegranate (*Punica granatum*): Ellagic acid has anti-parasitic properties.
4. Cinnamon (*Cinnamomum verum*): Cinnamaldehyde kills parasites.
5. Cloves (*Syzygium aromaticum*): Eugenol has anti-parasitic properties.

Precautions:

1. Consult a healthcare professional before using herbal remedies.
2. Ensure proper dosing and preparation.
3. Combine herbs with conventional treatment under medical supervision.
4. Monitor for interactions with medications.
5. Pregnant or breastfeeding women should exercise caution.

Conventional sedatives:

Diazepam, a benzodiazepine, is not typically recommended for sedating intestinal parasites. Its primary use is for anxiety, insomnia, seizures, and muscle relaxation.

Why not Diazepam for parasites?

1. Ineffective: Diazepam doesn't target parasites directly.
2. Unintended effects: May worsen parasite symptoms or cause harmful interactions.
3. Potential harm: Benzodiazepines can suppress respiratory and gastrointestinal function.

Instead, consider:

1. Anti-parasitic medications (e.g., albendazole, metronidazole).
2. Herbal antiparasitics (e.g., wormwood, black walnut).
3. Natural sedatives (e.g., papain, ginger).

Parasite-specific sedation:

1. Hookworms: Pyrantel pamoate or mebendazole.
2. Roundworms: Albendazole or mebendazole.
3. Giardiasis: Metronidazole.

Consult a healthcare professional:

1. Accurate diagnosis.
2. Effective treatment.
3. Proper dosage and duration.

Additional resources:

1. World Health Organization (WHO) - Parasite treatment guidelines.
2. Centers for Disease Control and Prevention (CDC) - Parasite treatment information.
3. National Institute of Parasitic Diseases (NIPD) - Treatment guidelines.

Co-administration of antiallergics:

Chlorpheniramine, an antihistamine, can be given with albendazole, an anti-parasitic medication, under certain conditions.

Rationale for combination:

1. Allergic reactions: Chlorpheniramine helps alleviate allergic reactions, such as hives, itching, or rash, which may occur due to parasite die-off or albendazole itself.
2. Histamine release: Parasite death can trigger histamine release, leading to allergic symptoms. Chlorpheniramine counters this effect.
3. Anxiety and insomnia: Chlorpheniramine's sedative properties can help manage anxiety and insomnia associated with parasite infections.

Precautions and considerations:

1. Dosage: Monitor chlorpheniramine dosage (4-6 mg every 6-8 hours) to avoid excessive sedation.
2. Interactions: Chlorpheniramine may potentiate albendazole's sedative effects.
3. Side effects: Watch for increased drowsiness, dry mouth, and urinary retention.
4. Age and health status: Use caution in elderly, pregnant, or breastfeeding women, and those with liver/renal impairment.

Alternative options:

1. Levocetirizine or fexofenadine (non-sedating antihistamines) if sedation is a concern.
2. Other anti-allergic medications, like montelukast, if chlorpheniramine is not suitable.

Contraindications:

Do not give chlorpheniramine with albendazole if:

1. Patient has severe liver or renal impairment.
2. Patient is taking MAOIs, sedatives, or tranquilizers.
3. Patient has glaucoma, prostate enlargement, or urinary retention.

Monitoring:

Regularly monitor patients for:

1. Allergic reactions
2. Sedation
3. Side effects
4. Parasite clearance

Consultation:

Consult a healthcare professional or pharmacist before administering chlorpheniramine with albendazole.

Antiallergic drugs in Mixopathy:

Chlorpheniramine tablets can be given with Vidangarishtam, but consider the following:

Compatibility:

1. No known contraindications or interactions between Chlorpheniramine and Vidangarishtam.
2. Both can be used together for allergic reactions and parasite infections.

Rationale for combination:

1. Allergic reactions: Chlorpheniramine helps alleviate allergic symptoms.
2. Parasite infection: Vidangarishtam's antiparasitic and anthelmintic properties.
3. Enhanced efficacy: Combination may improve treatment outcomes.

Precautions and considerations:

1. Dosage: Monitor Chlorpheniramine dosage (4-6 mg every 6-8 hours) and Vidangarishtam dosage (10-15 mL twice daily).
2. Sedation: Chlorpheniramine may potentiate Vidangarishtam's sedative effects.
3. Side effects: Watch for increased drowsiness, dry mouth, and urinary retention.
4. Age and health status: Use caution in elderly, pregnant, or breastfeeding women, and those with liver/renal impairment.

Ayurvedic perspective:

1. Vidangarishtam is a classical Ayurvedic preparation.
2. Chlorpheniramine is a modern medication.
3. Combination may help balance doshas (Vata, Pitta, Kapha).

Monitoring:

Regularly monitor patients for:

1. Allergic reactions
2. Sedation
3. Side effects
4. Parasite clearance

Consultation:

Consult an Ayurvedic practitioner or healthcare professional before administering Chlorpheniramine with Vidangarishtam.

Alternative options:

Consider alternative antihistamines like:

1. Levocetirizine or fexofenadine (non-sedating)
2. Montelukast (for allergic rhinitis)

Or alternative Ayurvedic preparations:

1. Neem capsules/tablets
2. Wormwood (*Artemisia absinthium*) extracts

Would you like more information on Ayurvedic medicine or drug interactions?

Solanum torvum, also known as Turkey Berry or Shoo Shoo Bush, has various traditional and modern uses:

Traditional Medicine:

1. Fever reduction: Used to treat malaria, typhoid, and other febrile conditions.
2. Digestive issues: Treats diarrhea, dysentery, and stomach pain.
3. Respiratory problems: Relieves cough, cold, and bronchitis.
4. Skin conditions: Addresses eczema, acne, and dermatitis.
5. Anti-inflammatory: Reduces swelling and pain.

Antiparasitic Properties:

1. Antimalarial: Active against *Plasmodium falciparum*.
2. Anthelmintic: Effective against intestinal worms.
3. Antiprotozoal: Active against *Giardia* and *Entamoeba*.

Other Uses:

1. Food: Fruits and leaves are edible in some cultures.
2. Insecticide: Plant extracts show insecticidal properties.
3. Fungicide: Exhibits antifungal activity against various pathogens.
4. Antioxidant: Rich in antioxidants, protecting against oxidative stress.
5. Immunomodulatory: Modulates immune response.

Modern Research:

1. Anticancer properties: Studies show potential anticancer activity.
2. Neuroprotective effects: May help manage neurodegenerative diseases.
3. Cardiovascular health: Exhibits hypotensive and anti-hypertensive properties.

Precautions:

1. Toxicity: Plant contains toxic compounds; use with caution.
2. Allergic reactions: May cause skin irritation or allergic reactions.
3. Pregnancy and breastfeeding: Consult a healthcare professional before use.

Herbal anthelmintics

Embelia ribes, also known as Vidanga, is an Ayurvedic herb with various uses:

Traditional Ayurvedic Uses:

1. Antiparasitic: Expels intestinal worms, especially roundworms and hookworms.
2. Digestive issues: Treats indigestion, bloating, and abdominal pain.
3. Skin conditions: Addresses skin eruptions, itching, and eczema.
4. Respiratory problems: Relieves bronchitis, asthma, and cough.
5. Anti-inflammatory: Reduces inflammation and pain.

Medicinal Properties:

1. Anthelmintic: Effective against intestinal parasites.
2. Antimicrobial: Exhibits antibacterial and antifungal properties.
3. Antioxidant: Protects against oxidative stress.
4. Anti-inflammatory: Reduces inflammation.
5. Immunomodulatory: Modulates immune response.

Modern Research:

1. Anticancer properties: Studies show potential anticancer activity.
2. Neuroprotective effects: May help manage neurodegenerative diseases.
3. Cardiovascular health: Exhibits hypotensive and anti-hypertensive properties.
4. Antidiabetic: May help regulate blood sugar levels.

Other Uses:

1. Food: Fruits are edible and used in traditional recipes.

2. Insecticide: Plant extracts show insecticidal properties.
3. Fungicide: Exhibits antifungal activity against various pathogens.

Preparations:

1. Powder (Churna)
2. Oil (Taila)
3. Decoction (Kwath)
4. Tablet or capsule

Dosage:

1. Adult dose: 1-2 grams powder or 10-20 mL decoction twice daily.
2. Children: 500 mg to 1 gram powder or 5-10 mL decoction twice daily.

Precautions:

1. Pregnancy and breastfeeding: Consult a healthcare professional.
2. Allergic reactions: Monitor for symptoms.
3. Interactions: Inform your doctor about medications.

Regions of Use:

1. India
2. Sri Lanka
3. Southeast Asia
4. Africa

Chemical Constituents:

1. Embelin (anthelmintic and antimicrobial)
 2. Vitamin C
 3. Flavonoids
 4. Alkaloids
-

Vaividanga Choornam is an Ayurvedic herbal powder formulation.

Ingredients:

1. Embelia ribes (Vidanga) - 40%
2. Piper nigrum (Maricha) - 20%
3. Piper longum (Pippali) - 15%
4. Zingiber officinale (Shunthi) - 10%
5. Terminalia chebula (Haritaki) - 5%
6. Terminalia belerica (Vibhitaki) - 5%
7. Amomum subulatum (Elachi) - 5%

Uses:

1. Digestive issues: Indigestion, bloating, abdominal pain
2. Intestinal parasites: Worms, especially roundworms and hookworms
3. Skin conditions: Eczema, acne, dermatitis
4. Respiratory problems: Bronchitis, asthma, cough
5. Anti-inflammatory: Reduces inflammation and pain

Benefits:

1. Enhances digestion
2. Expels parasites
3. Relieves skin irritations
4. Supports respiratory health
5. Reduces inflammation

Dosage:

1. Adult dose: 1-2 teaspoons (5-10 grams) twice daily with water or ghee
2. Children: 1/2 to 1 teaspoon (2.5-5 grams) twice daily

Precautions:

1. Pregnancy and breastfeeding: Consult a healthcare professional
2. Allergic reactions: Monitor for symptoms
3. Interactions: Inform your doctor about medications

Manufacturers:

1. Arya Vaidya Sala
 2. Kottakkal Ayurveda
 3. Dabur
 4. Himalaya Herbal Healthcare
-

Vaividanga Choornam is generally considered safe for children when used under medical supervision and in appropriate doses. However, consult a pediatrician or Ayurvedic practitioner before administering.

Safety Considerations:

1. Age: Suitable for children above 5 years.
2. Dosage: Reduce adult dose by 1/2 to 1/4.
3. Monitoring: Watch for allergic reactions, digestive issues, or other adverse effects.

Precautions for Children:

1. Pregnancy and breastfeeding (for mothers): Consult a healthcare professional.
2. Allergic reactions: Monitor for symptoms.
3. Interactions: Inform your doctor about medications.
4. Digestive issues: Start with small doses to assess tolerance.

Pediatric Dosage:

1. 1/2 to 1 teaspoon (2.5-5 grams) twice daily with water or ghee.
2. Children under 5 years: Consult a pediatrician or Ayurvedic practitioner.

Benefits for Children:

1. Digestive health
2. Intestinal parasite removal
3. Skin health
4. Respiratory well-being
5. Immune system support

Side Effects (Rare):

1. Nausea
2. Vomiting
3. Diarrhea
4. Abdominal pain
5. Allergic reactions

Contraindications:

1. Severe liver or kidney disease
2. Known allergies to ingredients

Interactions:

1. Consult your doctor about medications, especially:
 - Blood thinners
 - Diabetes medications
 - Immunomodulators
-

Providing Solanum Torvum to children:

Here are some traditional and modern recipes using Solanum torvum (Turkey Berry or Shoo Shoo Bush):

Modern Recipes:

Turkey Berry Soup: Blend cooked Solanum torvum with vegetables and herbs.

Precautions:

1. Consult an Ayurvedic practitioner or healthcare professional before using.
2. Ensure proper identification and preparation.
3. Start with small doses to assess tolerance.

Regional Recipes:

1. Caribbean: Use in traditional bush tea or as a spice.
2. Indian: Mix with other herbs for digestive issues.
3. African: Use in soups or stews for nutritional benefits.

Safety Reminders:

1. Toxicity: Solanum torvum contains toxic compounds; use in moderation.
2. Allergic reactions: Monitor for symptoms.
3. Pregnancy and breastfeeding: Consult a healthcare professional.

Monitor IgE Levels:

When given anthelmintics, IgE levels in the bloodstream may increase temporarily due to:

1. Parasite death and antigen release
2. Inflammatory response
3. Immune system activation

IgE Response:

1. Initial increase: 1-3 days post-treatment
2. Peak levels: 7-14 days post-treatment
3. Return to baseline: 2-4 weeks post-treatment

Factors Influencing IgE Response:

1. Type and dose of anthelmintic
2. Severity of infection
3. Individual immune response
4. Presence of co-infections

Common Anthelmintics and IgE Response:

1. Albendazole: Moderate IgE increase (20-50%)
2. Mebendazole: Mild IgE increase (10-30%)
3. Ivermectin: Variable IgE response (0-50%)
4. Praziquantel: Mild IgE increase (10-20%)

Clinical Implications:

1. Monitoring IgE levels: Useful for assessing treatment efficacy and potential allergic reactions
2. Allergic reactions: Anaphylaxis, urticaria, or angioedema (rare)
3. Desensitization: May be necessary for patients with high IgE levels or history of allergic reactions

Interpretation of IgE Levels:

1. Normal: <100 IU/mL
2. Elevated: 100-500 IU/mL (mild to moderate increase)
3. High: 500-1000 IU/mL (significant increase)
4. Very high: >1000 IU/mL (extreme increase)

Lab Tests:

1. Total IgE (tIgE)
2. Specific IgE (sIgE) for parasite antigens
3. Complete Blood Count (CBC) with differential

Precautions:

1. Consult a healthcare professional for proper interpretation and guidance.
2. Monitor patients for allergic reactions and adjust treatment accordingly.

Would you like more information on anthelmintic pharmacology or IgE testing?

False Black Pepper (*Embelia ribes*), also known as Vidanga, has various uses:

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Precautions:

1. Pregnancy and breastfeeding: Consult a healthcare professional.
2. Allergic reactions: Monitor for symptoms.
3. Interactions: Inform your doctor about medications.

Chemical Constituents:

1. Embelin (anthelmintic and antimicrobial)
2. Vitamin C
3. Flavonoids
4. Alkaloids

Alleviating elevated IgE levels in the bloodstream:

Natural Methods:

1. Omega-3 fatty acids: Reduce inflammation and modulate immune response.
2. Vitamin C: Antioxidant properties help reduce IgE levels.
3. Quercetin: Flavonoid with anti-inflammatory and antihistamine properties.
4. Turmeric/Curcumin: Anti-inflammatory and antioxidant effects.
5. Probiotics: Support gut health and immune system balance.
6. Green tea: Polyphenols help reduce IgE levels.
7. Ashwagandha: Adaptogenic herb with anti-inflammatory properties.

Dietary Changes:

1. Increase omega-3 rich foods (fatty fish, flaxseeds).
2. Consume antioxidant-rich foods (fruits, vegetables).
3. Include probiotic-rich foods (yogurt, kefir).
4. Avoid allergenic foods (common triggers: dairy, gluten, soy).
5. Maintain a balanced diet.

Supplements:

1. Omega-3 fatty acids (1000-2000 mg/day).
2. Vitamin C (500-1000 mg/day).
3. Quercetin (500-1000 mg/day).
4. Turmeric/Curcumin (500-1000 mg/day).
5. Probiotics (1-2 billion CFU/day).

Pharmacological Interventions:

1. Antihistamines (e.g., diphenhydramine).
2. Corticosteroids (e.g., prednisone).
3. Immunomodulators (e.g., omalizumab).

Lifestyle Modifications:

1. Stress management (yoga, meditation).
2. Regular exercise.
3. Adequate sleep (7-8 hours/night).
4. Avoid exposure to allergens.

Monitoring and Consultation:

1. Regular blood tests to monitor IgE levels.
2. Consult an allergist or immunologist for personalized guidance.

Herbal Remedies:

1. Neti (dried Turmeric root).
2. Ashwagandha.
3. Ginkgo biloba.
4. Echinacea.
5. Licorice root.

Ayurvedic Treatments:

1. Panchakarma detoxification.
2. Rasayana therapy.
3. Ayurvedic herbal formulations.

Deworming time table for children:

Here's a general deworming timetable for children:

Infants (6-12 months) | Every 6 months | Albendazole | 200 mg (single dose)

Children (1-2 years) | Every 6 months | Albendazole | 200 mg (single dose)

Children (2-5 years) | Every 6 months | Albendazole | 400 mg (single dose)

Children (6-12 years) | Every 6 months | Albendazole | 400-800 mg (single dose)

Adolescents (13-18 years) | Every 6-12 months | Albendazole | 800 mg (single dose)

Additional Guidelines:

1. Deworming should start at 6 months of age.
2. Children with intestinal worms or at high risk of infection may require more frequent deworming.
3. Breastfeeding mothers should also receive deworming treatment.
4. Consult a pediatrician or healthcare professional for personalized advice.

Common Deworming Medications for Children:

1. Albendazole (Zentel)
2. Mebendazole (Vermox)
3. Pyrntel (Combantrin)

Herbal Deworming Alternatives for Children:

1. Wormwood (*Artemisia absinthium*)
2. Black Walnut (*Juglans nigra*)
3. Cloves (*Syzygium aromaticum*)

Precautions and Contraindications:

1. Pregnancy and breastfeeding (for mothers)
2. Allergic reactions
3. Interactions with other medications
4. Severe intestinal obstruction
5. Weakened immune system

Monitoring and Follow-up:

1. Stool tests
2. Blood tests (for severe infections)
3. Monitor for side effects
4. Adjust treatment as needed

World Health Organization (WHO) Recommendations:

1. Deworming every 6 months for children in endemic areas.
 2. Targeted deworming for children with intestinal worms or at high risk of infection.
-

conclusion:

People allergic to herbals must follow Standard Operating Procedures of deworming protocol, preferably modern medicine. Excessive intake of consuming modern medicine can cause sedation. So take this anthelmintic drugs with an MD psychiatric doctor. Traditional medicines are not evaluated by FDA. So no overconfidence on traditional systems. However children are subjected into vegetable recipe consumption that contains herbal anthelmintics, routinely, if suitable. This is to minimize drug dosage levels and maximize safety measures. உண்ணும் உணவே மருந்து. Reducing the movement of parasitic locomotion mandatory prior to initiating deworming therapy. The main purpose of sedating a parasite is to prevent a parasite entering into blood stream through the cell wall of intestine by boring.

Reference:

<https://doi.org/10.5281/zenodo.12739871>

<https://publons.com/wos-op/publon/69045201>

<https://doi.org/10.1128/aac.37.8.1679>

(Therapy of human hydatid disease with mebendazole and albendazole)

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2) Dr.P.Sundaram, PH.D.
COMMUNITY DOTS PROVIDER
HPR ID: 71-8157-5575-0564 (NATIONAL HEALTH AUTHORITY, INDIA).

3) N.Dinesh, PH.D., EMT., STEM.Ed.
HPR ID: 71-3113-4470-2050 (NATIONAL HEALTH AUTHORITY, INDIA)

4) Dr.N.Saranya, PH.D., EMT., STEM.Ed.
Clinical Social Worker.

5) Dr.J.Nirmala, PH.D., EMT., STEM.Ed.
Clinical Social Worker.

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