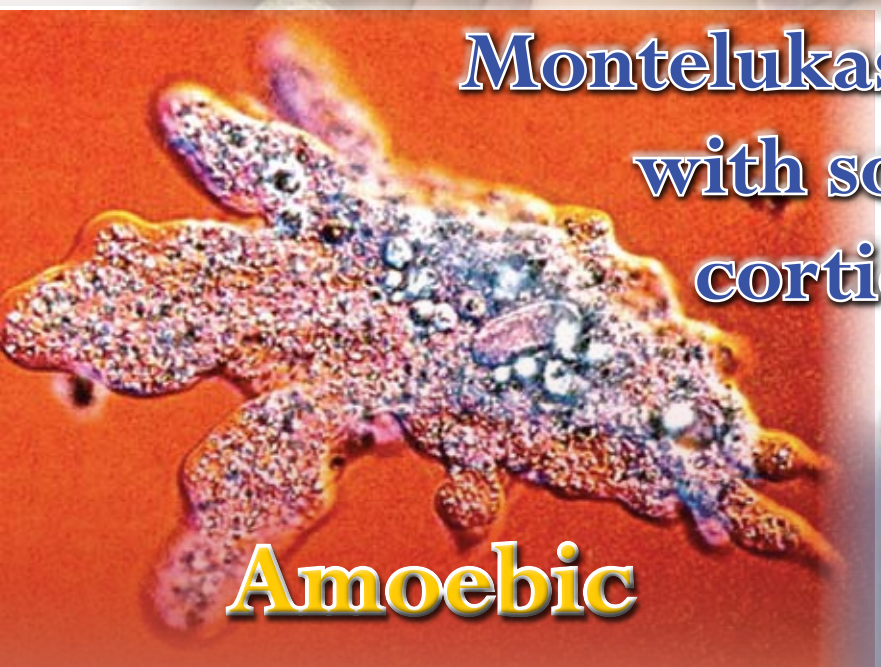
MEDICAL UPDATES

EGYPHAR

Issue No.:12 January 2013

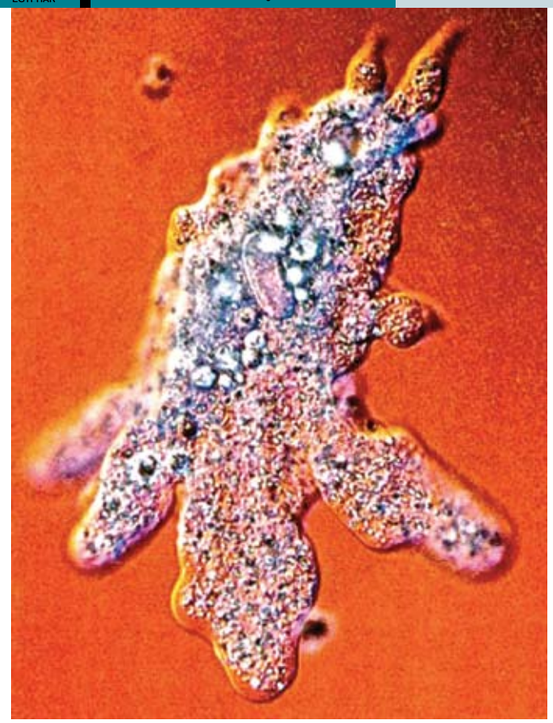
Malnutrition and Infections in Children

Montelukast spares therapy with some inhaled corticosteroids



Amoebic dysentery

Egyphar Medical Updates



2011 Jan 13;2011.

Amoebic dysentery

Mackey-Lawrence NM, Petri WA Jr.

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Abstract

INTRODUCTION:

Amoebic dysentery is caused by the protozoan parasite Entamoeba histolytica.

It is transmitted in areas where poor sanitation allows contamination of drinking water and food with faeces. In these areas, up to 40% of people with diarrhoea may have amoebic dysentery. METHODS AND OUTCOMES: We conducted a systematic review and aimed to answer the following clinical question: What are the effects of drug treatments for amoebic dysentery in endemic areas? We searched: Medline, Embase, The Cochrane Library, and other important databases up to April 2010 We included harms alerts from relevant organisations such as the US Food and Drug Administration (FDA) and the UK Medicines and Healthcare products Regulatory Agency (MHRA).

RESULTS:

We found 6 systematic reviews, RCTs, or observational studies that met our inclusion criteria. We performed a GRADE evaluation of the quality of evidence for interventions.

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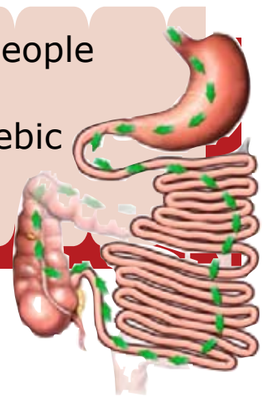

CONCLUSIONS:

In this systematic review, we present information relating to the effectiveness and safety of the following interventions: diiodohydroxyquinoline (iodoquinol), diloxanide, emetine, metronidazole, nitazoxanide, ornidazole, paromomycin, secnidazole, and tinidazole.

J Egypt Soc Parasitol. 2006 Apr;36(1):53-64.

Patients with gastrointestinal complains due to enteric parasites In Egypt

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Abstract

A total of 210 patients with gastrointestinal troubles, of both sex and a mean age of 32 +/- 6.1 years, selected from the outpatient's clinics of Al-Azhar University Hospitals. 115 (54.76%) had dysentery, 95 (45.23%) did not have dysentery, 15 (14%) suffered flatulence, 20 (9.52%) had epi-gastric pain, 19 (9.05%) had vague abdominal pain, 5 vomiting (5.2%) and 10 (4.9%) had fever. Two symptoms were in 29 (13.81%) patients and three symptoms in 12 (5.71%).

Of the 210 patients, 20 (9.9%) had helminthes infection, 121 **(57.6%) had intestinal protozoa** and 69 (32.9%) had no parasitic infection. Of these parasite-free patients, 16 had Shigella sp. and nine had Campylobacter sp. Of the patients with intestinal protozoa, 34 (16.2%) had E. histolytica/dispar by stool examination of stained smears. By using ELISA for detection of E. histolytica adhesion in stool samples of 115 with diarrhea only 18 had true E. histolytica infection and of 3 without diarrhea only one had E. histolytica infection.

Mean-while, ELISA did not cross-reacted E. coli, Giardia lamblia, Cryptosporidium parvum, Endolimax nana or Blastocystis hominis. So, ELISA for detection of E. histolytica adhesion in stool samples was more specific than microscopy and safe direction to the E. histolytica treatment. Apart from intestinal protozoan and bacteria, helminthes were seen in stool analysis. These were Schistosoma mansoni (0.95%), Capillaria sp. (0.95%), Enterobius vermicularis (1.90%) macroscopically, Hymenolepis nana (4.3%) and Ascaris lumbricoides (1.43%).

Int J Environ Res Public Health. 2011 April; 8(4): 1174–1205.

Malnutrition and Gastrointestinal and Respiratory Infections in Children: A Public Health Problem

Infectious disease is the major cause of morbidity and mortality in developing countries, particularly in children. Increasing evidence suggests that protein-calorie malnutrition is the underlying reason for the increased susceptibility to infections observed in these areas. Moreover, certain infectious diseases also cause malnutrition, **which can result in a vicious cycle**. Malnutrition and bacterial gastrointestinal and respiratory infections represent a serious public health problem. The increased incidence and severity of infections in malnourished children is largely due to the deterioration of immune function; limited production and/or diminished functional capacity of all cellular components of the immune system have been reported in malnutrition. In this review, we analyze the cyclical relationship between malnutrition, immune response dysfunction, increased susceptibility to infectious disease, and metabolic responses that further alter nutritional status. The consequences of malnutrition are diverse and included: increased susceptibility to infection, impaired child development, increased mortality rate and individuals who come to function in suboptimal ways.

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gastrointestinal infections, malnutrition, respiratory infections, malnourished children, immune response dysfunction. Deficiency in macronutrients such as protein, carbohydrates and fat provoke protein-calorie malnutrition (PCM), and when combined with micronutrient deficiencies, they are among the most important nutritional problems with hundreds of millions of pregnant women, elderly and young children particularly affected. Malnutrition is one of the most important underlying causes of child mortality in developing countries, particularly during the first 5 years of lifethe major causes for this are poverty, world conflicts, lack of education, natural disasters and poor access to health care.PCM usually manifests early in children between 6 months and 2 years of age and is associated with early weaning, delayed introduction of complementary foods, a low-protein diet and severe or frequent infections . Nearly one-third of children in the developing world are malnourished.

Diverse studies have demonstrated that malnutrition increases the risks of infection and death

Diverse studies have demonstrated that malnutrition increases the risks of infection and death . The most frequent causes of death in children under 5 years old are acute diarrhea and acute respiratory infection. Several studies have shown that malnutrition is frequently causally associated with these deaths However, as malnutrition rarely appears as cause of death on death certificates, its impact is largely underestimated.

Curr Vasc Pharmacol. 2009 Jul;

Pharmacological agents in the treatment of venous disease: an update of the available evidence

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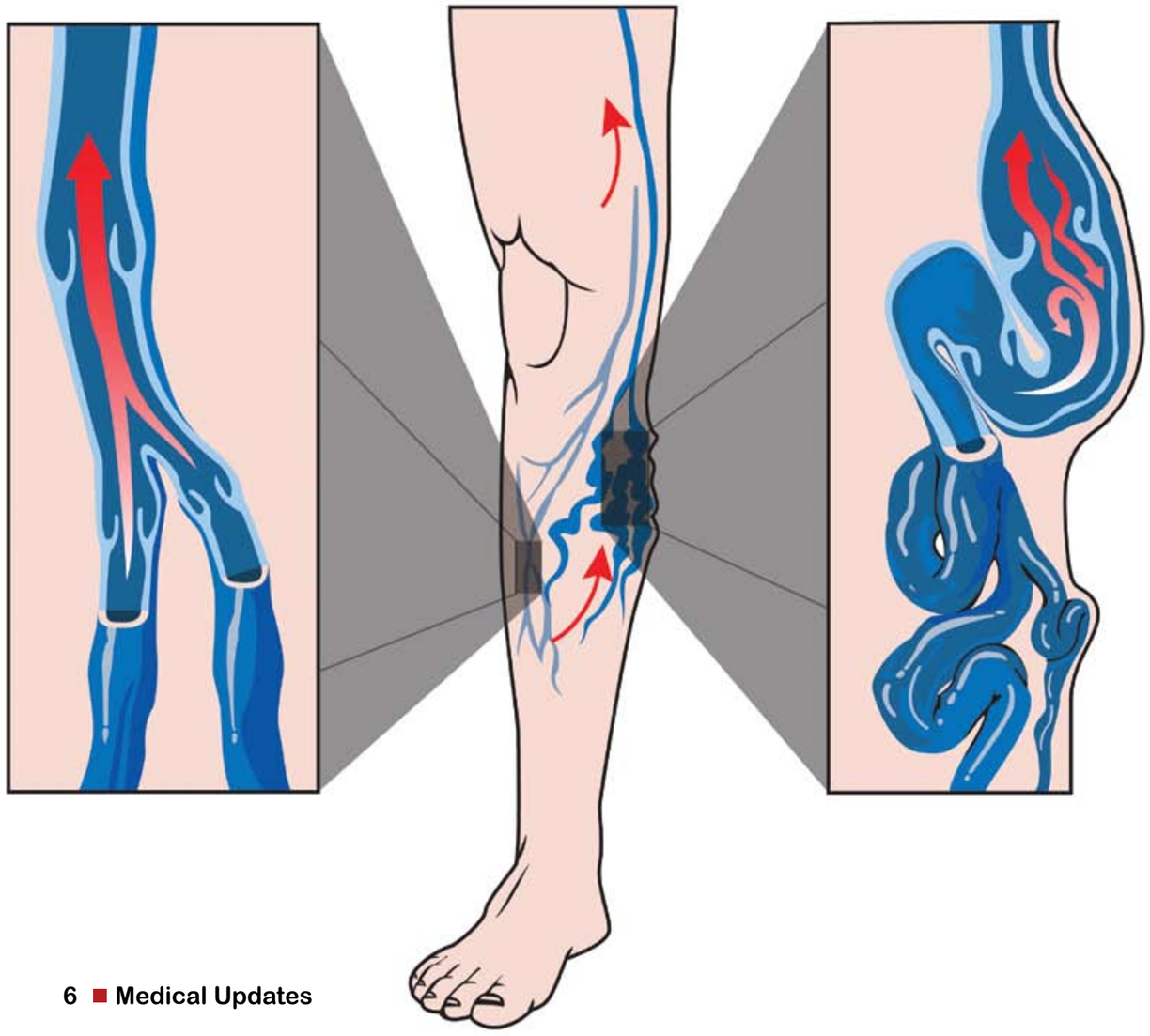

Abstract

Varicose veins and the complications of venous disease are thought to affect over a quarter of the adult population and the management of these conditions are a major cause of health service expense. Advances in the understanding of venous pathophysiology have highlighted numerous potential targets for pharmacotherapy. This review considers the evidence for pharmacological agents used for the treatment of chronic venous disease.

A literature search using Pubmed, Embase and Cinahl databases was performed. The initial search terms 'varicose vein', 'venous ulcer' and 'venous disease' were used with appropriate search limits to identify prospective studies of pharmacotherapy in venous disease. A wide range of venoactive and non-venoactive drugs have been studied in patients with venous disease. The use of micronized purified flavonoid fraction (MPFF) can reduce symptoms of pain, heaviness and oedema in patients with venous reflux and a recent meta-analysis concluded that MPFF improves healing in patients with venous ulceration treated with compression.

Pentoxifylline may be a useful adjunct to compression therapy for patients with venous ulceration. Oxerutins and calcium dobesilate may be of benefit in reducing oedema and rutosides may help to relieve the symptoms of varicose veins in pregnancy. The clinical benefits of other medications remain unproven. Although numerous pharmacological agents have been proposed and studied, MPFF has demonstrated the greatest clinical benefits in patients with venous disease. Further research is needed to define the role of venoactive drugs in clinical care and improve our understanding of the pathophysiology of venous disease to help identify new therapeutic avenues.

Varicose veins and the complications of venous disease are thought to affect over a quarter of the adult population

Although numerous pharmacological agents have been proposed and studied, MPFF has demonstrated the greatest clinical benefits in patients with venous disease.

J Pharm Biomed Anal. 2013 Feb 23;74:250-6.

Simultaneous determination of montelukast as sparing therapy with some inhaled corticosteroids in plasma of asthmatic patients

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Abstract

Montelukast (MKST) is a leukotriene receptor antagonist that has been concomitantly used with inhaled corticosteroids (ICS) for its steroid-sparing effect in the long-term management of asthma. However, the simultaneous determination of MKST, when used as ICS tapering therapy, with ICS in human plasma has not yet been reported. A fast and efficient reversed phase monolith HPLC method was developed for simultaneous determination of MKST with some ICS in plasma of asthmatic patients.

The separation was achieved on monolith reversed phase column by isocratic mode at a flow rate of 1.0mlmin(-1) using a mobile phase consisted of a mixture of acetonitrile and 10mM phosphate buffer adjusted to pH 3.5 (40:60, v/v) and detected at 240nm. Betamethasone dipropionate (BDP) was used as the internal standard. All the studied ICS and MKST were efficiently separated within less than 6min.

The obtained linearity range for the developed HPLC method was 0.03-10μgml(-1) with correlation coefficients>0.9995 and the detection limits were 0.009-0.016μgml(-1) in plasma for all the studied drugs. The method was validated in agreement with the requirements of US-FDA guideline and was recommended for the target applications. The method is valuable for investigations concerned with the effective tapering of ICS therapy with MKST in patients with chronic asthma in clinical practice without loss of asthma control.

Montelukast (MKST) is a leukotriene receptor antagonist that has been concomitantly used with inhaled corticosteroids

A fast and efficient reversed phase monolith HPLC method was developed for simultaneous determination of MKST with some ICS in plasma of asthmatic patients

N Z Med J. 2012 Nov 23;

Anti-inflammatory effect of azithromycin

Sanders JG, Jean-Louis MF.

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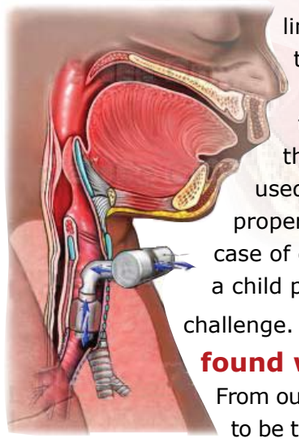
Abstract

We present an atypical case of subglottic stenosis with diffuse tracheal stenoses in a child responsive only to steroid and azithromycin (AZI) therapy. A 12-year-old boy presented with acute biphasic stridor on the background of an 18-month history of progressive shortness of breath, decreased exercise tolerance and snoring. Subsequent laryngoscopy and bronchoscopy revealed granulation tissue in the subglottic area, two circumferential stenoses of the trachea and a number of fibrous bands at the carina and at the aperture if the right main bronchus were seen.

A battery of serological and histological investigations did not reveal a specific aetiology. In the acute phase this patient only responded to steroid therapy. In the medium term, repeat laryngoscopies were performed with sharp division of stenotic bands and balloon dilatation. The patient's condition was unresponsive to non-steroidal anti-inflammatories, multiple first-line antibiotics, and surgical treatment of the tracheal lesions. However definitive treatment was found with the macrolide antibiotic AZI used for its anti-inflammatory properties. This highly unusual case of diffuse tracheal stenoses in a child proved to be a management challenge. Definitive **treatment was found with the use of AZI.** From our literature search this appears to be the first reported case of AZI successfully treating subglottic and tracheal stenoses.

subglottic stenosis with diffuse tracheal stenoses in a child responsive only to steroid and azithromycin (AZI) therapy

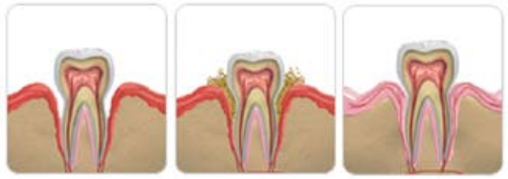


Gen Dent. 2011 May-Jun;59(3):180-7; quiz 188-9.

Benefits of additional courses of systemic azithromycin in periodontal therapy

Schmidt E, Kaciroti N, Loesche W.

Center for Human Growth and Development, University of Michigan, USA.



Abstract

The use of systemic antimicrobials such as doxycycline, metronidazole, and azithromycin in conjunction with debridement has achieved results superior to those produced by debridement alone. The purpose of the present study was to determine if previous results could be improved upon by administering repeated doses of azithromycin during the hygiene phase. One hundred patients with moderate to advanced periodontitis were treated with scaling and root planing plus three courses of azithromycin during the hygiene phase. All patients then were re-evaluated and periodontal surgery and/or extractions involving 96 teeth were performed in 32 patients. All patients then entered a maintenance program that lasted up to 192 weeks, with four-month recalls. Clinical parameters were recorded at baseline, at re-evaluation (week 6 after baseline), and at 96 and 192 weeks into maintenance. The results indicated that probing depths, bleeding upon probing, and suppuration were reduced significantly at re-evaluation. In addition, 14 teeth that displayed a Class III mobility at baseline improved to either Class I or Class II. **There was no relapse during the maintenance phase.** Multivariate analysis after 192 weeks indicated no change in the number of sites that bled upon probing, or had pockets that were 5.0-6.0 mm or ≥ 7 mm. Ninety-five percent of the sites that initially bled upon probing did not do so four years post-treatment. The results indicate that three courses of azithromicin in conjunction with root instrumentation during the hygiene phase led to long-lasting beneficial effects on all clinical parameters for at least 192 weeks.

The results indicate that three courses of azithromicin in conjunction with root instrumentation during the hygiene phase led to long-lasting beneficial effects on all clinical parameters for at least 192 weeks

Allergy Asthma Proc. 2010 May-Jun;31

Relationships among rhinitis, fibromyalgia, and chronic fatigue.

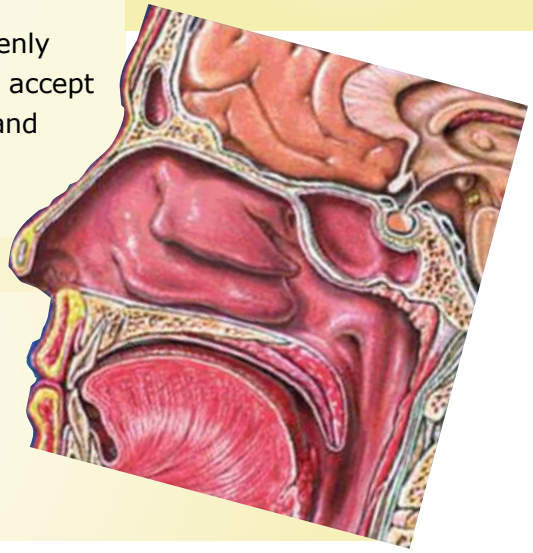
Baraniuk JN, Zheng Y.

Georgetown University, Washington, DC USA.

Abstract

New information about the pathophysiology of idiopathic nonallergic rhinopathy indicates a high prevalence in chronic fatigue syndrome (CFS). This article shows the relevance of CFS and allied disorders to allergy practice. CFS has significant overlap with systemic hyperalgesia (fibromyalgia), autonomic dysfunction (irritable bowel syndrome and migraine headaches), sensory hypersensitivity (dyspnea; congestion; rhinorrhea; and appreciation of visceral nociception in the esophagus, gastrointestinal tract, bladder, and other organs), and central nervous system maladaptations (central sensitization) recorded by functional magnetic resonance imaging (fMRI). Neurological dysfunction may account for the overlap of CFS with idiopathic nonallergic rhinopathy. Scientific advances are in fMRI, nociceptive sensor expression, and, potentially, infection with xenotropic murine leukemia-related virus provide additional insights to novel pathophysiological mechanisms of the "functional" complaints of these patients that are mistakenly interpreted as allergic syndromes. As allergists, we must accept the clinical challenges posed by these complex patients and provide proper diagnoses, assurance, and optimum care even though current treatment algorithms are lacking.

As allergists, we must accept the clinical challenges posed by these complex patients and provide proper diagnosis.



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