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infosheet
April 2014

Newsletter Of The Nigerian Branch Of The South African Cochrane Centre
Calabar Institute Of Tropical Diseases Research And Prevention, University Of Calabar Teaching Hospital

ARTESUNATE PLUS PYRONARIDINE FOR UNCOMPLICATED MALARIA

Malaria is an infectious disease caused by the plasmodium parasites. In 2012, there were an estimated 207 million cases of malaria and 627000 deaths from malaria globally. Most of these deaths occurred in children living in Africa.[1]

There are five species of plasmodium parasite that cause malaria in human beings - *Plasmodium falciparum is the most deadly and is responsible for 90% of all malaria cases.*

Uncomplicated malaria, which is a milder form of malaria, is characterized by initial symptoms such as fever, chills, headache, tiredness, muscle pains and vomiting. If not treated promptly uncomplicated malaria can develop into severe illness with life-threatening complications.

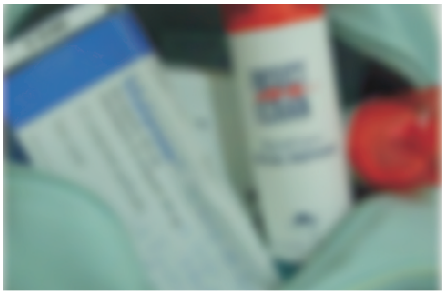
The World Health Organization currently recommends the use of artemisinin-based combination therapies (ACTs) for the treatment of uncomplicated *P.falciparum* malaria. Five ACTs are recommended by the WHO, namely: dihydroartemisinin-piperaquine (DHA-P); artesunate plus mefloquine (AS+MQ); artemether-lumefantrine – six-dose regimen (AL6); artesunate plus amodiaquine (AS+AQ); and artesunate plus sulfadoxine-pyrimethamine (AS+SP).

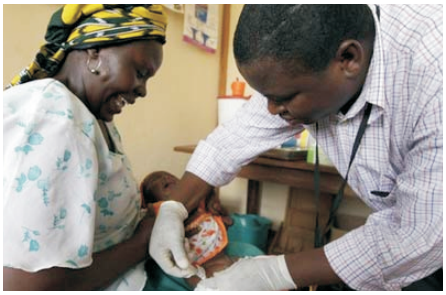
A major problem in the fight against malaria is antimalarial drug resistance. In 2008, resistance to artemisinin derivatives by P. Falciparum was reported the Thai-Cambodian border. In order to prevent the spread of artemisinin resistance there have been global initiatives. These initiatives include among other things, the development of new artemisinin-combination drugs. One of such drug is artesunate plus pyronaridine.

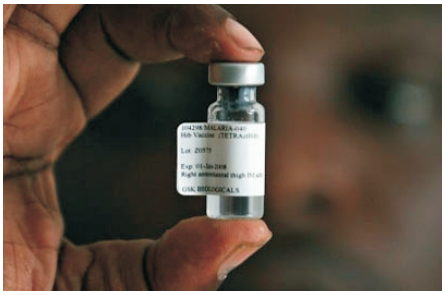
Pyronaridine was first synthesized in China in 1970. It has been used in China and Africa as monotherapy to treat P.falciparum malaria. Studies have been conducted to assess the efficacy of artesunate plus pyronaridine.

A Cochrane Review[2] of six randomized controlled trials involving 3718 children and adults was recently carried out to assess the efficacy and safety of artesunate pyronaridine for treating uncomplicated *P. falciparum* malaria. The review found that artesunate pyronaridine is probably as effective as artemether lumefantrine or artesunate plus mefloquine for treating malaria and preventing recurrent parasitaemia. Although Serious adverse events were rare with any of the ACTs assessed, short-lived liver toxicity was more frequently observed with artesunate pyronaridine that with the other ACTs.

Artesunate-pyronaridine compared well with some of the WHO recommended ACTs. However, considering the fact that the studies included in the review included







mainly older children and adults further studies assessing the efficacy and safety of artesunate plus pyronaridine in young children in Africa and Asia will be needed before it can be considered as first- or second- line treatment option for uncomplicated *P.falciparum* malaria.

References

1. http://www.who.int/mediacentre/factsheets/fs094/en/
2. Bukirwa H, Unnikrishnan B, Kramer CV, Sinclair D, Nair S, Tharyan P. Artesunate plus pyronaridine for treating uncomplicated *Plasmodium falciparum* malaria. Cochrane Database of Systematic Reviews 2014, Issue 3. Art. No.: CD006404. DOI: 10.1002/14651858.CD006404.pub2.

EVIDENCE AT YOUR FINGERTIPS

(From the Cochrane Library)

TECHNICAL SUMMARY

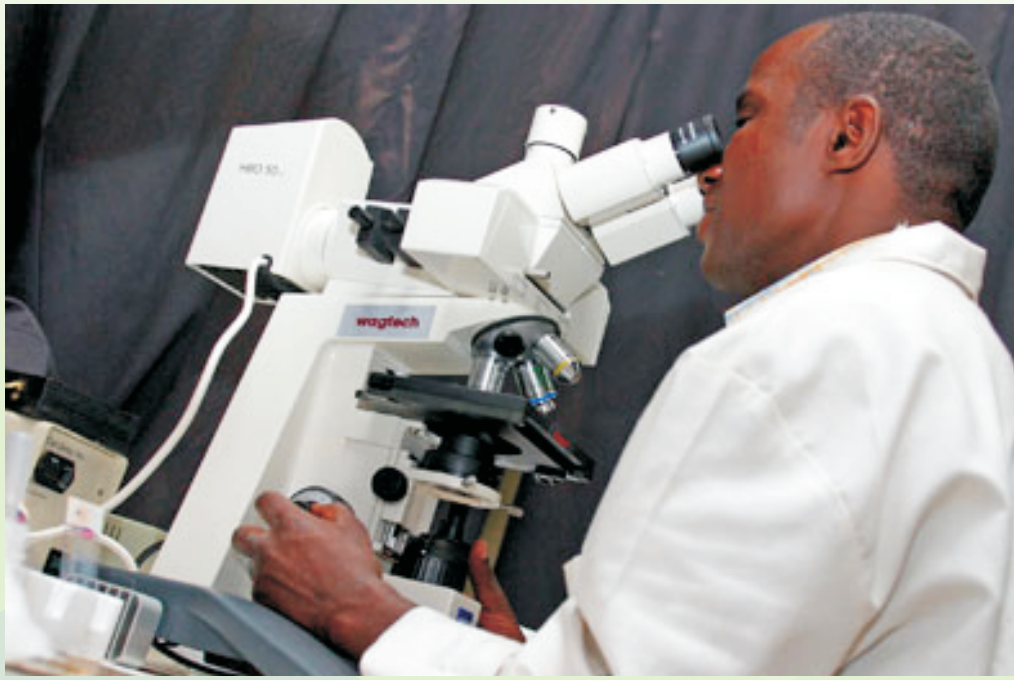
Antibiotic prophylaxis for preventing post solid organ transplant tuberculosis

BACKGROUND

Tuberculosis (TB) is a global health problem. In 2007, there were an estimated 9.27 million new cases of TB worldwide. Solid organ (kidney, liver, heart, lung, pancreas) transplant recipients are up to 300 times more likely to develop TB than people in the general population.

Some Clinical Practice Guidelines recommend antibiotic prophylaxis against TB for solid organ transplant recipients with latent TB. There is however no general consensus among guidelines on this. Isoniazid is the most widely used anti-TB prophylaxis drug post-transplant . Rifampin/pyrazinamide or rifampin alone, are alternatives.

Tuberculin reactivity tests to identify people who should receive prophylaxis are limited because loss or suppression of normal immune response is common among people with end-stage kidney disease. Most people who develop TB post-transplant have negative tuberculin



reactions pre-transplant. Treatment of latent infection (prophylaxis for reactivation) could offer protection against active TB for solid organ transplant recipients, particularly during the peak immunosuppression period at six months to one year post-transplant.

REVIEW OBJECTIVE

To assess the benefits and harms of antibiotic prophylaxis for preventing TB in post solid organ transplant recipients.

Main Results

Three randomized controlled trials conducted in India and Pakistan were included in the study. Participants were 558 kidney transplant recipients.

Intervention was anti-TB Prophylaxis (Isoniazid - 300 mg/d for 1 year) compared with no chemoprophylaxis.

Participants who received Isoniazid were 65% less likely to develop TB compared to those who received no chemoprophylaxis. (3 studies, 558 participants): RR 0.35, 95% CI 0.14 to 0.89; I^2 = 49%).

For all-cause mortality, there was no significant difference between those who received anti-TB prophylaxis and those who did not receive chemoprophylaxis (3 studies, 558 participants): RR 1.39, 95% CI 0.7 to 2.78; I^2 = 0%).

There was a 59% higher risk of developing liver dysfunction among those who received anti-TB prophylaxis compared to those who received no chemoprophylaxis (3 studies, 558 participants): RR 1.59, 95% CI 1.06 to 2.40; I^2 = 0%). Most of the cases of liver dysfunction were mild or reversible.

There were no statistically significant differences between those who received anti-TB prophylaxis and those who received no chemoprophylaxis for acute allograft rejection episodes.

Among the three inlcuded studies, one study reported withdrawal of one patient, another study recorded no withdrawals, and the third study was unclear on the number of withdrawals.

Conclusion

The authors recommend anti-TB prophylaxis with Isoniazid for kidney transplant recipients in TB-endemic regions during the first year following the transplant. This is in addition to established TB prophylaxis guidelines for people with latent TB. For transplant recipients who live in low-TB prevalence countries but who have a history of living in countries with high prevalence, prophylaxis with Isoniazid may be considered.

Studies in other solid organ transplant recipients such as heart, lung, and liver are required as well as further studies in kidney transplant recipients. Studies conducted in places other than the Indian subcontinent, studies in children and studies assessing other outcomes are also required.

Adamu B, Abdu A, Abba AA, Borodo MM, Tleyjeh IM. Antibiotic prophylaxis for preventing post solid organ transplant tuberculosis. Cochrane Database of Systematic Reviews 2014, Issue 3. Art. No.: CD008597. DOI: 10.1002/14651858.CD008597.pub2.

PLAIN LANGUAGE SUMMARIES

EXTRA GLOVES OR SPECIAL TYPES OF GLOVES FOR PREVENTING SHARP INJURIES IN HEALTHCARE WORKERS

Background

Healthcare workers can hurt themselves accidentally with needles or sharp instruments that have been used in patient care. This carries a small risk that the healthcare worker becomes infected with a viral disease such as hepatitis or HIV. Therefore it is important to prevent blood contact to prevent infection. We evaluated whether the use of gloves, more than one layer of gloves or special gloves can prevent needles or sharp instruments from piercing the skin. Up until June 2013, we found 34 studies that evaluated 6890 operations. There were no studies in non-surgical staff.

Two pairs of gloves compared to one pair only

In 12 studies, two pairs of gloves reduced the number of perforations in gloves by 71% compared to the use of one pair of gloves. In three studies, two pairs of gloves reduced blood stains on the skin by 65%. The reduction in self reported needlestick injuries was less clear.

Three pairs of gloves compared to two pairs of ordinary gloves

One low-quality study showed that triple gloves compared to double gloves can further reduce perforations.

A pair of thicker or special gloves compared to a pair of ordinary gloves

Five low-quality studies showed that the number of perforations was similar for thicker and thinner gloves. In two low-quality studies, the use of one pair of fabric gloves over one pair of normal gloves reduced perforations compared to two pairs of normal gloves. This was similar for gloves made from special material such as fabric or steel, used in between normal gloves.

Indicator gloves

Indicator gloves show a coloured spot when they are pierced. Two studies showed that they reduced the number of perforations per glove but not the total amount of perforations.

Sensitivity of the fingers

There were no indications that using more layers of gloves decreased sensitivity of the fingers.

Conclusions

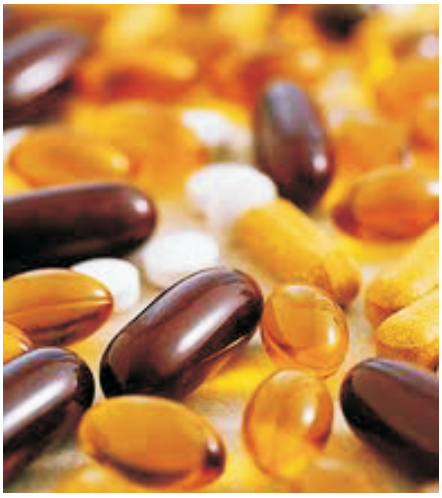
Surgeons and surgical staff can reduce their risk of contracting a serious viral infection by wearing two pairs of gloves instead of one pair of gloves. The use of three glove layers or gloves made from special material probably reduces the risk further but these need better evaluation. We need further studies to evaluate whether gloves have a similar preventive effect in other healthcare professionals outside the operating theatre.

Mischke C, Verbeek JH, Saarto A, Lavoie MC, Pahwa M, Ijaz S. Gloves, extra gloves or special types of gloves for preventing percutaneous exposure injuries in healthcare personnel. Cochrane Database of Systematic Reviews 2014, Issue 3. Art. No.: CD009573. DOI: 10.1002/14651858.CD009573.pub2.

ANTIBODIES FOR PREVENTING MEASLES AFTER EXPOSURE

People who have had measles, or measles vaccine, have antibodies against the virus in their blood that protect them from developing measles should they come into contact with it. These antibodies can be extracted from blood donated by these individuals.

If people without antibodies come



into contact with someone who is contagious with measles, they are likely to contract the disease. Measles is usually debilitating and can have serious consequences including death, so preventing it is desirable. One way of preventing measles in this group, when they do come into contact with a contagious person, is to inject them with antibodies that have been extracted from blood donations. This has been practised since the 1920s, but measures of its effectiveness have varied and the minimum amount of antibodies that we can give to prevent measles is unknown.

Based on seven studies (1432 people), of overall moderate quality, injecting antibodies into a muscle of people who came into contact with measles, but lacked their own antibodies, was effective at preventing them catching the disease compared to those who received no treatment. Using the modern day antibody preparation, people were 83% less likely to develop measles than those who were not treated. It was very effective at preventing them developing complications if they did contract measles and very effective at preventing death. The included studies generally did not intend to measure possible harms from the injections. Minor side effects were reported, such as muscle stiffness, redness around the injection site, fever and rash. Importantly, only two studies compared the measles vaccine with the antibody injection in this group of people, so no firm conclusions could be drawn about the relative effectiveness of these interventions.

The antibody injection is often recommended for pregnant women, infants and immunocompromised people (if they do not have their own antibodies to measles and come into contact with someone who is contagious with measles). The included studies did not include these groups of people, so it is unknown whether the effectiveness of antibody injections is different for them. We were also unable to identify the minimum dose of antibodies required as only one study measured the specific amount of measles antibodies in the injections and one other study estimated this figure; the results of these two studies were not consistent.

The evidence is current to August 2013.

Young MK, Nimmo GR, Cripps AW, Jones MA. Post-exposure passive immunisation for preventing measles. Cochrane Database of Systematic Reviews 2014, Issue 4. Art. No.: CD010056. DOI: 10.1002/14651858.CD010056.pub2

VITAMIN D AND RELATED VITAMIN D COMPOUNDS FOR PREVENTING FRACTURES RESULTING FROM OSTEOPOROSIS IN OLDER PEOPLE

Why do older people suffer bone fractures?

Hip fractures and several other types of fractures are very common in post-menopausal

women and older men due to age-related weakening of their bones (osteoporosis).

What is the impact of bone fractures in older people?

Fractures due to osteoporosis often occur in the hip, wrist or spine and can lead to considerable disability or even death. Those who survive often have reduced mobility and may require greater social and nursing care.

Why might vitamin D help?

Vitamin D is necessary for building strong bone. Older people often have low vitamin D levels because of lack of exposure to sunlight and low consumption of vitamin D in their diet. Therefore, it has been suggested that taking additional vitamin D in the form of supplements may help to reduce the risk of fractures of the hip and other bones.

Purpose of this review

To investigate the effects of vitamin D or vitamin D-related supplements, taken with or without calcium supplements, for preventing fractures in post-menopausal women and older men.

Conduct of this review

The review authors searched the medical literature up to December 2012, and identified 53 relevant medical trials, with a total of 91,791 people taking part. The trials reported fracture outcomes in postmenopausal women or men aged over 65 years from community, hospital and nursing-home settings. These trials compared vitamin D or related supplements with – or without - calcium supplements, against fake supplements (placebo), no supplement or calcium supplements alone.

Findings of this review

The review found reliable evidence that taking vitamin D only, in the forms tested in the trials, is unlikely to prevent fractures. However, reliable evidence showed that vitamin D taken with additional calcium supplements slightly reduces the likelihood of hip fractures and other types of fracture. The review found that there was no increased risk of death from taking vitamin D and calcium.

Although the risk of harmful effects (such as gastrointestinal (stomach) symptoms and kidney disease) from taking vitamin D and calcium is small, some people, particularly with kidney stones, kidney disease, high blood calcium levels, gastrointestinal disease or who are at risk of heart disease should seek medical advice before taking these supplements.

Avenell A, Mak JCS, O'Connell D. Vitamin D and vitamin D analogues for preventing fractures in post-menopausal women and older men. Cochrane Database of Systematic Reviews 2014, Issue 4. Art. No.: CD000227. DOI: 10.1002/14651858.CD000227.pub4.

RECENT EVENTS

Reviews for Africa Programme Nigeria

Group photo of participants, with facilitators and some Branch staff. Front Row L-R: Dr. Friday Odey, Dr. Emmanuel Effa, Dr. Atim Udo. Back Row L-R: Dr. Olukayode Abayomi, Mrs. Moriam Chibuzor, Miss. Obiamaka Okafo, Mrs. Dachi Arikpo, Mr. Akosa Okafo

Participants during a training session.

REVIEWS FOR AFRICA PROGRAMME 2014

The first phase of the 2014 edition of the Reviews for Africa Programme (RAP) Nigeria took place from 6-12 March 2014 at the Calabar Institute of Tropical Diseases Research and Prevention, Cross River State, Nigeria. This phase, which consists of a protocol development course was attended by four participants – Dr. Olukayode Abayomi, Mrs. Dachi Arikpo, Dr. Atim Udo and Miss Obiamaka Okafo. Although the course consisted of didactic and practical sessions, a good portion of time was allotted for participants to work on their protocols.

The faculty consisted of Professor Martin Meremikwu, Dr. Emmanuel Effa, Dr. Friday Odey and Mrs. Olabisi Oduwole, all experienced review authors.

The participants expressed appreciation for the course and indicated that they had benefitted from attending the RAP.

MEET OUR RAP INTERNS

Olukayode Abayomi

Consultant psychiatrist at Ladoke Akintola University of Technology Teaching Hospital, Ogbomoso.

Review Title: Psychosocial interventions for cannabis abuse and/or dependence among persons with co-occurring cannabis use and psychotic disorders

I really enjoyed and benefited from the 2014 Reviews for Africa Programme protocol development course. The course was highly informative and focused on practical issues in research synthesis. The small class size, highly interactive and informal learning environment provided a good platform for helping participants overcome the challenges of protocol development. The diverse educational backgrounds and research interests of the participants resulted in rich, intellectually stimulating discussions. The facilitators were eager to devote time to individual participants that had specific challenges with their protocols. I found this very helpful in resolving some peculiar issues related to my topic. Also, the facilitators were willing to share experiences and used several simple, real-life illustrations. These contributed greatly to my understanding of critical concepts in evidence-based methods. We had to complete some assignments and had ample opportunity to provide feedback while working on our projects. This level of participant involvement facilitated real progress on our protocols. I will readily recommend this course to anyone interested in acquiring skills in writing and completing systematic reviews!

Dachi Arikpo

Research Assistant, Nigerian Branch of the South African Cochrane Centre

Review Title: Educational Interventions for Improving Weaning Practices

I am thankful to the Nigerian Branch of the South African Cochrane Centre for giving me the opportunity to attend the RAP 2014. It was an enlightening experience and I enjoyed the hands-on practical and interactive sessions. I appreciate the facilitators for their selflessness in taking us through the various processes and delivering the lectures in a simple easy-to-understand manner. I now have a better understanding of the process of undertaking a systematic review and I am better equipped to complete my protocol.

Obiamaka Okafo

Registered Nurse/Midwife

Review Title: Intermittent Preventive Treatment for Malaria in Infants

I would like to thank the Nigerian Branch of the South African Cochrane Centre for the opportunity given to me to attend the RAP. The programme was simply innovative and a great plus for me. It provided a platform for me to learn the rudiments of review writing and enhanced the completion of my protocol.

The atmosphere was very conducive and favoured learning. The facilitators were very competent and delivered the lectures in a simple manner. The practical and interactive sessions corrected misconceptions and made me understand the training better. I would certainly not fail to mention the nice meals we were treated to.

Atim Udo

Lecturer, University of Calabar & consultant, UCTH.

Review Title: Antibiotics for Treating Septic Abortion.

The RAP was very insightful and eye-opening, and I believe every participant left a different person. We learned how to go about carrying out a scientifically acceptable systematic review. We also gained insight into the checks that should be applied in carrying out primary research, even though that was not the primary concern of the training programme. The atmosphere was remarkable. The trainers and participants were quite pleasant and were willing to share ideas in cordial ways. The trainers were particularly patient with me, willing to go over unclear areas. The sandwiches, afang and semovita (dishes) were also particularly interesting. All in all I am glad I attended the programme.

New and Updated Reviews from the Cochrane Library

The following reviews recently published in the Cochrane Library were authored or co-authored by Nigerians.

New Reviews

Antibiotic prophylaxis for preventing post solid organ transplant tuberculosis **by *Bappa Adamu , Aliyu Abdu , Abdullahi A Abba , Musa M Borodo and Imad M Tleyjeh.***
Issue 3, 2014.

Other Recent Reviews

Prophylactic versus selective blood transfusion for sickle cell disease in pregnancy **by** *Babasola O Okusanya, Olufemi T Oladapo*. Issue 12, 2013.

Interventions for the prevention of mycobacterium avium complex in adults and children with HIV **by** *Muhammed Mubashir B Uthman, Olalekan A Uthman and Ismail Yahaya. Issue 4, 2013.*

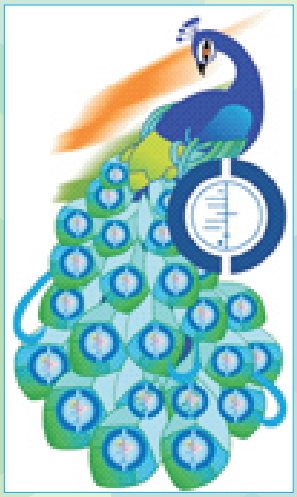
Home or community-based programmes for treating Malaria **by** *Charles I Okwundu, Sukrti Nagpal, Alfred Musekiwa, David Sinclair. Issue 5, 2013.*

Interventions for HIV-associated nephropathy **by** *Ismail Yahaya, Olalekan A Uthman, Muhammed Mubashir B Uthman. Issue 1, 2013.*

Intramuscular versus intravenous anti-D for preventing Rhesus alloimmunization during pregnancy **by** *Charles I Okwundu, Bosede B Afolabi. Issue 1, 2013*.

ANNOUNCEMENTS

Issue 1, 2014 is online – The complete issue of Issue 1, 2014 is now online. Please visit www.thecochranelibrary.com



KEY DATES FOR COLLOQUIUM

- Call for abstracts and workshops: 3 February
- Early registration opens: 3 March
- Call for stipend applications: 3 March
- Deadline for abstract and workshop submissions: 24 March
- Meeting requests open: 12 May
- Abstracts and workshops notification: 12 May
- Receipt of stipends application deadline: 19 May
- Stipends applicants notified: 23 June
- Early registration closes: 14 July
- Regular registration begins: 15 July
- Meeting request deadline: 4 August

Cochrane Colloquium 2014: The 22nd Annual Cochrane Colloquium will be hosted by the South Asian Cochrane Network and Centre and will take place at the Hyderabad International Convention Centre, Hyderabad, India, 21-26 September 2014.

BECOME AN EMBASE SCREENER

The EMBASE project provides an opportunity for new and potential contributors to get involved with Cochrane work. No prior experience is needed.

Announcements *(continued)*

The purpose of the project is to identify reports of randomised controlled trials (RCTs) and quasi-RCTs from EMBASE for publication in the Cochrane Central Register of Controlled Trials (CENTRAL).

For more information and to volunteer visit:

http://www.cochrane.org/news/tags/authors/become-embase-screener-cochranes-innovative-embase-project-now-open

Cochrane Colloquium 2016 in Korea: The 2016 Cochrane Colloquium will be hosted by the Korean Branch of the Australasian Cochrane Centre

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