in the pre-transmission season (August 2004) with Arte-
sunate + Sulphadoxine/Pyrimethamine and followed for 14
days. They were screened for malaria in the following
transmission season (October 2004). Further samples were
collected in October 2006.

Results: Detected anti-MSP3 antibodies on Day0 of treat-
ment were 41%, 20% and 12% for IgG, IgG1 and IgG3
respectively. Positive percentage on Day14 after treatment
were 25%, 12% and 9% for IgG, IgG1 and IgG3 respectively
and in 2006 were 33.3%, 21% and 6% for IgG, IgG1 and IgG3
respectively. Twenty six and 16 individuals had IgG1 or IgG3
or both on Day0 and Day14 respectively, all of them were
slide negative in the next transmission season. In October
2006, 24 had IgG1 or IgG3 or both, 19 were slide negative.

Conclusion: Pre-season treatment has no significant
effect on the number of reactive antibodies ($p > 0.05$). There
was no significant association between IgG presence and
malaria infection in 2006 ($p > 0.05$), despite approximately
same IgGs positivity in 2004. Anti-MSP3 IgG1 and IgG3 could
contribute to the persistence of asymptomatic low para-
sitaemia during the dry season. Different epitopes between
recombinant and natural MSP3 antigen stimulate different
IgGs response. That should be considered when assessing
vaccine trails.

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47.014
Determination of Parasite Clearance Time in Antimalarial
Drug Trials Using Real-Time Quantitative PCR (PCR)
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Microscopy is generally relied upon for malaria diag-
nosis and determination of parasite density. However in
drug efficacy trials where high throughput screening is
required, microscopy is slow, labour intensive and unable
to detect low-grade infections reliably. Estimation of par-
site density in antimalarial drug trials is important as
endpoints such as time to parasite clearance or percentage
reduction in the initial parasitaemia level allows com-
parison of the efficacy of different drug combinations. In
this study, Real-time Quantitative PCR (qPCR) was used to
determine parasite clearance time in an efficacy trial of
two antimalarial drugs, Artemether-Lumefantrine combina-
tion (Coartem®) and Pyronaridine-Artesunate combination
(Pyramax®). Blood samples were collected at 8-hourly inter-
vals following treatment from each of the 106 patients
enrolled in the study. The resulting 10 samples per patient
collected over a 3-day period were analyzed by qPCR ampli-
fication of the 18SrDNA gene to determine the time to
parasite clearance. The results indicate that low-grade para-
sitaemia (<20 parasites/$\mu$L) was still detectable by qPCR in
20% of the patients up to 24 hours after they were negative
by microscopy. Our results indicate that the application of
a more sensitive parasite detection method such as qPCR,
could lead to more precise determination of the relative
efficacy of antimalarial drugs.

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47.015
Peritoneal Dialysis: A Life Saving Intervention for Acute
Renal Failure from Falciparum Malaria in a Secondary Care
Setting
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Background: The mortality associated with severe
malaria remains high in malaria endemic regions due to
the non availability of sophisticated intensive care facilities
and limited resources. Acute renal failure from falciparum
malaria requiring renal replacement therapy portends a
grave prognosis in rural India. In a low resource country like
ours hemodialysis facilities are found only in tertiary care
centres which are inaccessible to the majority of people who
suffer from this disease.

Objective: To describe peritoneal dialysis as a relevant
alternative to hemodialysis in a secondary care setting
in rural India. Materials and methods: Case series of 13
patients admitted to the Baptist Christian hospital with
severe malaria requiring dialysis.

Results: Thirteen patients underwent peritoneal dialysis
for acute renal failure resulting from falciparum malaria. 10
were between 18—45 years of age and three were below 12
years of age. 11 had falciparum malaria while 2 had mixed
falciparum and vivax malaria. 10 were oliguric. Serum cre-
atinine levels ranged between 2.8 mg% to 23.4 mg%. 9 had
cerebral involvement and 9 had jaundice. Seven patients
had elevated transaminases of which five had levels more
than 200. All but one had AST more than ALT. 8 patients
had Hb less than 7 gms of which four were less than 5 gms.
10 patients had respiratory distress. All adult patients were
attended with artesunate and doxycycline, artesunate and
clindamycin were used in the pediatric age group. Continu-
ous peritoneal dialysis was carried out for an average of 4.7
days. One peritoneal dialysis was complicated by peritonitis
which resolved with antibiotics. 11 patients recovered com-
pletely while two succumbed to the disease within 24 and
48 hours of admission.

Conclusion: Peritoneal dialysis can be a life saving inter-
vention for patients with severe malaria in a secondary care
centre in rural India.

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47.016
Production and Modification of Human Monoclonal Anti-
body Fab Fragments to the 19-Kilodalton C-Terminal
Merozoite Surface Protein 1 of Plasmodium falciparum
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An effective vaccine for malaria has not yet been
developed. Passive immunotherapy with human monoclonal
antibodies may provide a valuable therapeutic alterna-
tive. A combinatorial immunoglobulin gene library was