Tropical Medicine and Health
Vol. 37 (2009) , No. 4 p.153

Transferrin Polymorphisms in Childhood Malarial A
Gabonese Children

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(Accepted June 13, 2009)

Abstract: Severe malarial anaemia (SMA) is one of the most outst

malaria in African children. It is often associated with iron deficienc
soluble transferrin revealed controversial data. Despite the implicati
factors in malaria pathogenesis, nothing is known about the role of i
polymorphisms in this plague. Nevertheless, these polymorphisms h
with pathogenesis of diseases associated with iron deficiency.
We conducted a cross-sectional study including 59 children with Sl
malaria anaemia (MMA) and 92 with non-anaemia malaria (NAM)
polymorphisms G258S, R300H, A477P, P570S from transferrin e
respectively and S142G from transferrin receptor1 (TfR1) exon 4 b
mean age of children with SMA, MMA and NAM was 27.7 ± 8.8,
15.4 months respectively, confirming that SMA is associated with y
Alleles of transferrin C2 (corresponding to P570S) and C3 (corres
occurred in 13.8% and 1.2% of the children, respectively. Allele C3
children with SMA (n=4, 6.8%). The frequency of allele C2 was sig
between study groups: 1.7%, 11.4%, and 26.2% respectively for S
p&It;0.0003. Allele of transferrin C2 was associated with decreased
anaemia (malarial anaemia [8.9%] versus NAM [26.2%], p&It;0.0
polymorphisms R300H and A477P were not found. The frequency
S142G was 13.6%, 12.5%, 13.0% respectively for SMA, MMA, a
that it had no influence on the risk of malarial anaemia. Data suppor
transferrin polymorphisms influence the risk of SMA.

Key words: *P. falciparum*, malarial anaemia, transferrin polymor
allele, transferrin C3 allele

[PDF (111K)] [References]

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To cite this article:

Jean Bernard Lekana-Douki, Daniel Parzy, Pascal Cnze Obiang, I
Mbadinga, Nestor Obiang, Francis Fumoux and Maryvonne Komb
Polymorphisms in Childhood Malarial Anaemia in the Gabonese Cl
and Health, Vol. **37**, pp.153-158 (2009) .

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doi:10.2149/tmh.2008-27