

## Hepatic Function in Cerebral Malaria

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**OBJECTIVE:** To evaluate the possibility that the encephalopathy of cerebral malaria is secondary to hepatic dysfunction.

**BACKGROUND:** It was proposed that hepatic dysfunction may explain the encephalopathy of cerebral malaria because:

1. Abnormalities in hepatic function are known to exist in malaria;
2. Previous experience with Reye's Syndrome has shown that severe hepatic dysfunction may be present despite the relative absence of hepatic abnormalities as detected by light microscopy;
3. Certain features of the cerebral pathology are similar in Reye's syndrome and cerebral malaria;
4. During a previous study a child with cerebral malaria was found to have marked abnormalities in hepatic function including an elevated venous blood ammonia.

**DESCRIPTION:** Patients with uncomplicated malaria or cerebral malaria admitted to Chantaburi Provincial Hospital were studied on admission. The test for venous blood ammonia was performed immediately. Reducing substances, SGOT, SGPT and bilirubin were measured in frozen sera.

**PROGRESS:** The results of these tests are given in Table 1. It seems unlikely from these findings that hepatic dysfunction accounts for the encephalopathy in any of our patients with cerebral malaria.

Table 1.

Number	Age	Sex	Serum Sugar mg/100 ml	SGOT (Sigma Units)	SGPT (Sigma Units)	Bilirubin (mg/100 ml)	Ammonia (Normal <0.1 um/ml)
<b>Uncomplicated Malaria</b>							
1	28	M	100	14	22	0.7	.023
2	18	M	164	34	21	0.6	.068
3	31	M	98	31	21	1.0	.049
4		M	97	73	36	2.1	.128
5		M	119	24	16	0.4	.096
6	15	M	99	98	39	1.1	.050
7	28	M	145	23	16	0.8	.049
8	21	F	93	25	15	1.0	.049
9	30	F	97	75	28	0.5	.035
10	20	M	113	25	16	0.7	.062
<b>Cerebral Malaria</b>							
1	31	M	96	35	19	1.3	.052
2	17	F	117	84	41	1.3	.046
3	15	M	92	71	28	5.2	.041
4	32	M	63	55	34	1.7	.062
5	27	M	96	44	31	0.7	.038
6	16	M	220	27	25	0.0	.046
7	18	M	114	24	23	0.3	.024
8	29	M	149	31	23	4.5	.032