TREATMENT OF PERNICIOUS MALARIA (COMA) BY NICOTINIC ACID AND ITS AMIDE.

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Recently two cases of pernicious malaria (coma) came under our care. One of these cases was treated with an intravenous injection of quinine bihydrochloride together with a massive dose of nikethamide (an amide of nicotinic acid). The second case was given intravenous quinine bihydrochloride with nicotinic acid.

Case 1.—A Mohamedan, aged 30, was admitted on November 27, 1944, with multiple bomb wounds (mine) on both legs and superficial abrasions on the right forehead. These wounds were superficial and required no surgical interference.

On the 28th he complained of abdominal discomfort and at 21.00 hours he developed fever. On the 29th, at 04.00 hours, he became unconscious.

When examined then the condition was: Pulse 174. Temperature 97.8° F. Respiration 14. B.P. 80/60.

Nervous system: Unconscious, not responding to painful stimuli. Pupils dilated and sluggishly reacting to light.

Reflexes: Knee and ankle jerks active on both sides. Plantars, indefinite response.

Lumbar puncture: Clear fluid under slight tension. No organisms found. Number of cells normal.

Urine: Catheter specimen, nothing pathological.

Stomach wash: Nothing abnormal.

Blood slides: Thick and thin film—M.T. + +.

On the above findings the diagnosis of pernicious malaria (coma) was made.

Treatment.—(1) Intravenous quinine bihydrochloride gr. 4, repeated every four hours. Total given, gr. 12.

(2) Intravenous nikethamide 3 c.cm. at once and repeated every thirty minutes. Total given, 45 c.cm.

(3) Tracheal tube passed under direct vision and plugs of mucus sucked out by a catheter passed through the tube.

The patient recovered consciousness at 13.30 hours on the 29th. No bad after-effects were noticed.

Case 2.—On the night of February 3, 1945, a young male Hindu was admitted at 00.15 hours in an unconscious state. He had had irregular fever for a few days and on the 2nd became unconscious at 20.30 hours. He was seen by a Medical Officer at 22.30 hours, diagnosed cerebral malaria (coma) clinically and given gr. 4 of quinine bihydrochloride, intravenously.

Condition on admission.—Pulse 120. Temperature 98.8° F. B.P. 80/62.


Lumbar puncture: Clear fluid under considerable tension (210 mm. of water). Drained until pressure down to 110 mm. of water.

Spleen: Palpable 1½ fingerbreadths below costal margin.

Blood slides: Thick and thin films negative. This may be explained by the previous injection of quinine bihydrochloride.
Urine: Catheter specimen—nil pathological.

From the history a diagnosis of cerebral malaria (coma) was made and it was decided to try the effect of nicotinic acid.

*Treatment.*—200 mg. of nicotinic acid in one pint of sterile physiological saline was given at a rapid rate. The effect was dramatic. The patient recovered consciousness in thirty-five minutes after the start of the nicotinic acid drip.

This was followed by one intramuscular injection of atebrin musonate gr. 4½ and the routine treatment for malaria.

**DISCUSSION.**

The pathology of pernicious malaria (coma) so far as is known is a blocking of the capillaries in the brain by embolisms of malaria parasites.

Because of its vasodilator action intravenous injections of nicotinic acid (5 to 10 mg.) have been given in cases of cerebral thrombosis by Furtade (1933), in angina pectoris by Nevahl (1934) and in Ménière's disease by Atkinson (1935), with promising results.

It was therefore decided to try the effect of the vasodilator properties of nicotinic acid and nikethamide in cases of cerebral malaria.

**CONCLUSION.**

Two cases of pernicious malaria (coma) are recorded and details of treatment are given.

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