INTRODUCTION

General Bonaparte captured the Maltese Islands on the 10 June 1798 and drove away the Knights of St John. He took over their Holy Infirmary and turned it into an *Hopital Militaire* for his sick troops. Dr Claude Etienne Robert, was appointed Medecin-en-Chef in charge of medical cases and Jean Pierre Fauverge Chirurgien Major was made responsible for surgical patients. During the following two years Robert treated no less than three thousand medically sick troops; and Fauverge treated ninety-two surgical cases. There were besides a number of venereal patients, forty of whom died within three months (1). Two outstanding events marked the tenure of office of these two French practitioners - an epidemic of scurvy and an outbreak of infestation by intestinal worms.

**Scurvy**

Modern medicine has shown that this disease is caused by a deficiency in the diet of vitamin C which is found naturally in fresh vegetables and fruits; but in 1798-1800 the cause of scurvy was still debatable. Some suggested that it was due to excessive moisture in the air but others were nearer the truth when they ascribed it to dietary deficiencies such as fresh vegetables and fruits (2). Following the uprising of the Maltese on the 2nd September 1798 and the consequent blockade of the French inside Valletta, food rations for the troops were limited in quantity and quality to make them last as long as possible but finally they were reduced to salted meat, beans and rice. Vegetables and fruits were unobtainable. The soldiers were encouraged to cultivate vegetables on the ramparts but these efforts had to be given up to save the water in the cisterns of the city as the hospital aqueduct had been cut off by the insurgents.

Scurvy made its appearance gradually towards the end of November but it made such rapid progress that soon there were about six hundred soldiers in hospital suffering from this disease. Fauverge has left us a classical picture of the clinical signs and symptoms as he saw them at the *Hopital Militaire*:

"The gums were swollen and bled, the teeth became loose and the mouth foul-smelling. The sick complained of acute pains in the chest and a feeling of heaviness in the precordial region, loss of appetite and general weakness. Almost the entire surface of the body was covered with livid areas; the skin of the lower limbs was dry and taut; the lips parched and livid; the face swollen and pale. Sometimes there occurred bleedings from the nose and mouth. Swelling of the lower abdomen and respiratory failure heralded the approach of death" (3).

Both Robert and Fauverge were aware that the only treatment that could have benefitted the scorbtics was a vegetarian fare and fresh meat, but these articles of food were not available. Consideration was given by the military command to the idea of making an incursion on Comino and a landing at Mellieha Bay to raid the countryside for fresh vegetables; but this idea was not followed up. (4)

**FEVERS**

Another disorder due to prolonged dietary deprivation was nightblindness. This is due to lack of Vitamin A which occurs naturally in green leafy vegetables. This is a condition of impaired vision occurring during the feeble light of night-time when small objects cannot be seen from a distance, and there is also the inability to distinguish colours. This condition was not alarming in itself in so far as the general health of the garrison was concerned but it had one serious consequence from the military viewpoint for those soldiers suffering from it could not be assigned guard duties on the ramparts at night as they were unable to detect any movements on the part of the insurgents prowling outside the walls of the fortifications. In the absence of the only effective remedy - the consumption of green vegetables - Robert tried to treat the patients by fumigations of the eyes with "aromatic plants" and "the livers of animals"; but he found that these remedies gave only transient relief.

**Nightblindness**

The scurvy was followed by a wave of "intermittent" fevers which responded well to the administration of laxatives and the application of compresses soaked in iced water and vinegar and placed over the forehead and head; so much so that it was not always necessary to prescribe quinine. In other patients, however, the fevers assumed a "malignant" form with prostration, dry tongue and lips and stupor, but they responded well to quinine in high doses.

Other cases that had to be dealt with were those suffering...
from lung tuberculosis with emaciation and dyspnoea which proved to be fatal. Postmortem examination of these men by Robert showed tubercles and purulent ulcers in the lungs with involvement of the mesentery.

**INTESTINAL WORMS INFESTATION**

Concurrently with the outbreak of "fevers", Robert had to deal with an invasion of intestinal worms from which no one in the garrison escaped. These worms *Ascaris lumbricoides* were of an "extraordinary" length, volume and numbers. There were instances where the host expelled two hundred of them in one stool. Some patients extruded the worms through their mouth during sleep with the risk of suffocation. Others complained of abdominal pain and tension. Fauverge remarked that even domestic animals - such as fowls and rabbits - were infected (5).

This roundworm infestation caused great dismay in the garrison with the result that "everyone" began having vermifuges - even those who showed no evidence of being affected. "I myself followed their example", confessed Robert when he himself extruded "a dozen worms of astonishing size and volume". Robert treated the hosts with vermifuge powders as recommended in French hospitals formularies with very good results. However there were a few deaths and Robert took the opportunity to perform autopsies. He found that the presence of worms was confined to the intestines, the stomach, oesophagus and throat.

Since Robert's time, research workers have shown that the *Ascaris lumbricoides* could be as long as 35 cm with a diameter "of a lead pencil". It has been estimated that twenty adult round worms will consume 2.8 grams of carbohydrate each day from the host's small intestine thus interfering with the absorption of food with consequent loss of nutrition of the host. In Robert's days, therefore, this infestation was an added cause of dietary depletion apart from the starvation diet to which the host was already subjected due to lack of food supplies.

In Robert's time it was not known that round worm infestation was conveyed to man by the ingestion of the worm's eggs from contaminated soil and water and from the improper disposal of human faeces (6).

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**ENVYOY**

Robert and Fauverge left the *Hôpital Militaire* and Malta and returned to France as a result of the French capitulation of 5 September 1800. They continued to pursue a successful professional career in the French army and found time to write about their medical experiences in Malta. In 1802 Dr. C.E. Robert published his *Memoire sur la topographie physique et medicale de Malte*; and in 1803 Surgeon J.P. Fauverge gave to the press his *Des Maladies qui ont regne a Malte pendant Le Blocus de l'an VII et VIII.*

These two works form an outstanding chapter in the medical annals of Maltese history.

**REFERENCES**


5. Fauverge, op., cit., p. 17.