Diatribe 186

How to delay the eradication of Malaria.

Malaria is the third most prevalent killer in the world. In tropical countries, on average, it infects 300 million people every year. Thousands die or are permanently affected. In tropical Africa two children die from malaria every minute.

We now know that the infection is carried by the female of the anopheles mosquito. If the disease affected mainly Europeans, it would have been tackled far more vigorously. As it is, plenty of Europeans get infected every year; and with global warming, this number could be expected to increase year by year. This may be one of the reasons why Malaria has attracted more notice in recent times. Before then, partly due to its tricky nature but also due to the poverty of third world malaria sufferers, not a great deal of effort was put behind the eradication of malaria, at least not in proportion to its impact on humanity. In this it matched TB, which is once again on the rise in so-called advanced industrial countries.

The first effective remedy for malaria was found in the bark of the Cinchona tree in South America.. The discoverers were not some bunch of highly qualified chemists, but, as usual, it was native tribes people in the dim past who treated their sick with this remedy. In 1820 two French researchers isolated the active ingredient and called it quinine. British colonials in India, in their inimitable way, consumed the quinine in their gin-and-tonics, kidding themselves conveniently that it was the gin which was the active ingredient. Actually it was a minute part of the tonic water.

Unfortunately, the main malaria parasites are sneaky single-celled beasts that mutate at the proverbial drop of a hat. Because of this, quinine is only partially effective. It does reduce fatalities, however. It has one other advantage – it is cheap, around 20 cents a dose. As it turns out it is not the only known remedy.

The most recent discovery is a Chinese herbal remedy called artesiminin. When I talk about a recent discovery, it is actually a re-discovery made under romantic circumstances. An archaeological dig in China at the time of the US invasion of Vietnam unearthed, quite by chance, the recipe of a herbal tea said to be effective against fevers. The recipe dates back to 168 B.C. when a Chinese pharmacist isolated the active ingredient from the sweet wormwood plant *artemisia annua* . The supposedly secret recipe was transmitted to Ho Chi Min’s troops and is said to have played a major part in their ultimate victory.

What is this wonder drug?

The original malaria cure simply used the crushed leaves of the sweet wormwood plant to brew a tea, which patients drank as required. To-day this is not considered to be the best way of administering the drug. Other anti=malarial drugs soon lost their potency once they got into wide-spread use. The parasites developed immunity. The best way was to use combinations of drugs . This is typical of the way AIDS is countered nowadays. It is therefore assumed that artesiminin requires similar precautions and well it might. This is where politics enters into the equation.

So far, the World Health Organisation has approved only two suppliers of artesiminin based drugs. One is Novartis in Switzerland and the other is the Chinese company Guilin. These approvals are required to qualify drugs for support from the UN-backed Fund to Fight AIDS.

Even if artemisinin is a silver bullet capable of eradicating malaria world-wide, here is one reason why millions of people still die from this killer year after year. The

drug may only cost $ 1.40 per course, for many of the world's people this is still beyond their reach. For us it is unthinkable that mothers should be forced to watch their children die for the lack of what to us the less than the price of a cup of coffee. At a time when our political masters talk about dollar numbers ending with countless zeroes as a so-called stimulus package spent on indiscriminate and probably pointless waste, a fraction of this spending would eliminate malaria from the face of the earth.

But it gets worse. Not only can the two approved suppliers not produce enough to satisfy the market, the Chinese supplier has indicated that they wish to turn over some of their production facilities t other, more profitable drugs. Some of the problems of antibiotics also beset artemisinin. Because improvements to the patient are so immediately evident, patients are tempted and inclined not to complete the course of treatment and pass what's left to other sick members of the family.

In third world countries there are two problems – cost and accessibility. Added to this is competition from much cheaper fakes which have no therapeutic value and may actually be poisonous. In many of the places where these substitutes are flogged there is no mechanism for effectively publicising the deception.

The global recession isn't going to help either. Unless global warming spreads malaria alarmingly to western countries, it isn't likely that much extra money will be forthcoming for what is still conceived as charity in our neck of the woods. Yet it is possible, even likely, that money spent by western travellers on immunisation is all it would take to eradicate malaria world wide.

Recently, an Indonesian island was chosen for an experiment. Everybody was treated with artemisinin compounds . Because the island was too far distant from the mosquito-infested mainland to allow the insects to traverse the gap and all visitors were given the artemisinin treatment too, after one year the place was still declared malaria free. So we know the cure works.

The irony of the situation is that so far, although the pure artemsinin has never developed resistance in populations which have been treated with it, and that in this pure form it can be grown almost anywhere in the tropics, this is not being done because of the mere risk of such resistance. Indeed, in some countries the sale of the pure drug is prohibited!

What has all this to do with technology? Nearly everything. While the spread of malaria may be considered an act of god, so is the existence of remedies like quinine and artimisinine. Except that the latter two were discovered by humans through careful observation and cultivation. Multinationals had nothing to do with the development of the drugs. And while we have to credit hi-tech biology with the discovery of the problems of drug resistance development, it is the same mob who have put the price of these modified drugs out of reach of the people who need them desperately. It is the capitalist system which stopped the widespread use of the pure drug but refuses to spread the technology which would put and end to malaria. It is capitalism which controls the distribution of required drugs into distant communities because the distribution costs are too high in the eyes of the multinational drug companies.

How do we know all this? Simply because there are, even in this imperfect world, some countries like Cuba, where most medicine is free and where, although high-grade medical research is performed, the fruits of this research are open for use by the people who made this research possible.