to health. This application involves technology and the potential for patents. However, there is an ethical dilemma. Should a monopoly be allowed on a life saving treatment? When should it be justified for a sick person to suffer and die, because the monopoly holder will not make a sufficiently large profit from the treatment?

Sick patients are vulnerable and their vulnerability increases with the severity of the disease. A terminal patient may be willing to sell their car, house, and the future of their family for a cure. Medicine has fought hard to acquire legislation to prevent the unscrupulous peddling of quack cures. Indeed, the very term "patent medicines" emerged in the 19th century as a phrase associated with charlatans and the exploitation of the sick. Today, the vast profits that can be made from monopolies and exorbitant drug pricing in medicine has led to an inversion. Patent medicines are now seen as the evidence-based answer to disease. They are not. Not one cell in the human body is made from a drug, patented or not. Nutrients, quite unpatentable unless modified, are not even close to being as profitable as drugs are. The fact that nutrients are often more clinically effective, and that nutrients are invariably safer, does not enter the patent-pensive world of pharmaceutical finance. Nutrients are generic, and that's a dead end. Ascorbic acid at $35 a kilo does not excite stockholders and does not excite accountants. Wonder drugs do.

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Are Antipsychotic Drugs Safe?

Antipsychotic drugs can kill. Orthomolecular physicians have known for many decades that the use of antipsychotic drugs for patients with schizophrenia and bipolar disorder only rarely helps the patient, and indeed can actually prolong the patient's illness. While in the short term they can help to bring some control to the condition, over the long term they interfere with the natural history of the illness converting what might have been a self-limiting state into one which is chronic and unrelenting.

For example, Bleuler, in his studies of the natural history of schizophrenia, long before the advent of the earliest antipsychotic drugs in the 1950s, showed

that at the first presentation of schizophrenia, one-third would become well again without recurrence, one-third would pursue a relapsing course (acute episodes alternating with remissions) until they became chronic, and one-third would become chronic.

In the hands of conventional psychiatrists who use antipsychotic drugs, the published studies seldom describe complete, drug-free remission.

Orthomolecular physicians frequently report complete,[2] drug-free remission in their patients using the full range of the orthomolecular armamentarium, i.e diet, vitamins, minerals, attention to pollutants and food sensitivities.

Because patients taking antipsychotic drugs alone do not feel well, cannot function normally in society, and cannot use whatever skills they may have, a small proportion do commit suicide, the first way that such drugs can kill.

Antipsychotic drugs are conventionally divided into two classes, the "typical" and "atypical". The typical drugs include Chlorpromazine, Thioridazine, Triifluoperazine, and Haloperidal. The atypical drugs include Clozapine, Olanzapine, Quetiapine, and Risperidone.

There is increasing epidemiological evidence linking the typical antipsychotic drugs with sudden cardiac death[1-4]. The mechanism appears to be QT abnormalities, resulting in fatal *torsades de pointe*. Moreover the risk is dose dependent: the higher the dose the greater the risk, with older patients more at risk.

When the atypical antipsychotic drugs were introduced, they were promoted as being less prone to side effects and hence safer. However, no long term studies were carried out to demonstrate their safety compared with the typical drugs.

For all their claimed superiority over typical drugs, the long term patient compliance with all except the smallest doses does not seem to be superior over the typicals. Moreover they do carry the increased risk of patient death by two mechanisms, unrelated to each other.

Clozapine is a special case. Its propensity to cause bone marrow suppression especially of the white blood cell progenitors is very well known with the risk of fatal agranulocytosis. A failure to organize regular complete blood counts with patients taking Clozapine is regarded as malpractice.

In general, patients taking atypicals are prone to marked weight gain. There may be two explanations for this. It may be a direct pharmacological action. Alternatively, or as well, such patients tend to have poor incomes ("mandated patient poverty") and, hence, be unable to afford anything other than cheap foods rich in refined carbohydrates.

The result is a rising incidence of Metabolic Syndrome (the combination of hypertension and non-insulin dependent diabetes mellitus) among such patients. This carries a serious risk of cardiovascular disease, often ultimately, and unacceptably, fatal.

What of sudden cardiac death? Ray and his colleagues from Tennessee have found that the incidence of sudden cardiac death from atypical antipsychotic drugs is similar to that of users of typicals[5]. It was a remarkably well-performed epidemiological study. They used information from the state Medicaid system of tens of thousands of both typical and atypical antipsychotic drug users comparing with a matched, control group of nearly two hundred thousand non-users. The incidence of sudden death was higher[2] in both drug using groups. One interesting finding was that the incidence of sudden cardiac death among former drug users dropped to that of the control group.

In the corresponding editorial[6], various measures were proposed to reduce the risk of sudden death, such as performing an ECG (EKG) on every patient before ini-

tiating such drug therapy, restricting their use in off-label situations (in children and the demented elderly), more strict attention to other cardiac risk factors, and markedly reducing the doses which are prescribed.

However, they made no mention of the role of orthomolecular techniques in mitigating the problem, a serious omission.

In my opinion initiating orthomolecular therapy simultaneously with the initiation of antipsychotic drugs is the only ethically acceptable policy. It has two important, relevant advantages: allowing an earlier reduction in the doses of the drugs (and even cessation entirely); and a direct cardio-protective effect from high doses of niacin and ascorbate,

This is not to say that antipsychotic drugs should not be used, since they do have their value in the appropriate circumstances. But they ought to be used only after a far more thorough medical, not just psychiatric, assessment of the patient has been performed, including such factors as homocysteine, folate, vitamin B_{12}, and thyroid status[7]. Then they ought to be used for as short a time as possible.

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