

Chemotherapy

According to the National Cancer Institute, chemotherapy drugs can produce cures in about 15 percent of cancer cases. According to less enthusiastic experts, the figure is really 5%

In some cancers,... chemotherapy can cause the tumours to disappear. In other cases chemotherapy makes the tumor shrink. (or) may at least stop the tumor from growing or make it grow more slowly. There are some cases, however, in which chemotherapy has no effect on the growth of the tumor.' (Morra & Potts, 1980)

This is a less than ringing endorsement. These writers, who are strong proponents of the conventional approaches to cancer, go on to warn their readers that chemotherapy needs to be administered by specialists trained in its use: 'Patients who are not closely monitored could die from the side effects, because the drugs are very potent.' The situation has not changed since these comments were made. There has been no chemotherapeutic revolution.

What does chemotherapy involve?

Chemotherapy simply means that chemical substances are used to treat a medical problem. Taking aspirin for a headache is a relatively innocuous form of chemotherapy (though 750 people a year die in the US from aspirin abuse!). But, as applied to cancer treatments, chemotherapy involves the use of very powerful chemical substances.

Over 100 different drugs can be used either alone or in combination. These drugs are used because they are poisonous. They kill cells. They kill normal cells in the same way that they do cancer cells because, to this date, it has not been possible to develop a cancer-specific chemotherapeutic agent.

Chemotherapy drugs act generally by killing DNA or the DNA synthesising process. Those that simply attack the DNA will affect normal cells just as much as the cancer cells. Those that focus on the synthesising process will attack all fast dividing cells: including the cells that line the intestinal tract, blood-forming cells and hair cells. The result is that anyone taking one of these agents will suffer some degree of nausea and perhaps infection. These infections are themselves potentially life threatening. It is not uncommon for people undergoing chemotherapy to develop pneumonia for example - some dying as a result.

A random sampling of the kind of side-effects someone taking chemotherapy can expect to suffer are the following: mouth sores, bone marrow suppression, liver and/or kidney damage, skin darkening, nail damage, fluid retention, high blood pressure, heart damage, bleeding internally and externally, lowered blood calcium. Some of these are more general than others. Liver and kidney damage along with bone marrow suppression are the most widespread. Different agents have different effects. (Note: Anyone taking adriamycin or any of its variations (doxorubicin, epirubicin etc), for example, is advised to take co-enzyme Q-10 before, during and after treatment to protect the heart. In addition to these side-effects, some, if not the majority of chemotherapeutic agents are themselves carcinogenic - ie they will cause cancer themselves in a number of cases.

If anyone should doubt the reality of the seriousness of the side-effects, let them consider this. According to Dr Gerald Dermer, in some drug trials as many as 20 percent of cancer patients died not from the disease but from the chemotherapy - so-called 'toxic deaths'. These trials are done on people who have advanced cancers and are therefore recommended by doctors for clinical trials.

I have mentioned toxic death. There appear to be a large number of deaths associated with high-dose chemotherapy treatments. The more intractable cancers appear to be and the more desperate researchers are to show some effect the more likely they are to use high-dose treatment regimes. This does not benefit patients. Often the dose given is so lethal that it kills the bone marrow. This requires that patients undergo a procedure known as autologous bone marrow transplantation in which some of their bone marrow is taken out before the chemotherapy treatments and cultivated. At the end of the chemotherapy treatments this marrow is then transplanted back into the patient. This is an expensive, high tech but gruelling treatment which appears to have some short term benefit in increasing disease free periods but has no long term benefits in terms of increased survival.

Former Vice-President Hubert Humphrey, who eventually died from bladder cancer called chemotherapy 'bottled death'. As with radiation, side-effects are to be expected from chemotherapy because damage to the body is inevitable. One study reported that between 1965 and 1969 the one year survival rate for colon cancer was 68 percent but that this fell to 65 percent over the next two years, 1970-71. The reason being that it was now being treated more vigorously with chemotherapy.

The successes of chemotherapy

However, some cancers have shown a very positive response to chemotherapy. It has been shown to be very effective in the treatment of the following cancers: Burkitt's lymphoma, Hodgkins disease, non-Hodgkins lymphoma, acute lymphocytic leukemia, choriocarcinoma, embryonal Testicular Cancer, Ewing's sarcoma, Lymphosarcoma, retinoblastoma, rhabdomyosarcoma, and Wilms' Tumour. Unfortunately, together, these account for only five percent of all cancer cases.

The success rate in these cancers varies. The best responders are the lymphomas and the leukemias. In the case of Non-Hodgkins Lymphoma, low-grade (slow growing) tumours are incurable by any regime but medium and high grade tumours have a good response to chemotherapy and cure rates are estimated at 50-80 percent.

The form of leukemia affecting most children is the form that responds best to chemotherapy. When leukemia affects adults it tends to be a form that is less responsive - though a 5-year survival rate of 50% is still claimed. Unfortunately, chemotherapy will almost certainly cause serious side-effects to children. Toxicity effects have been described as 'horrendous' - in one study 61% suffered seizures. Strokes and other 'acute mental status changes' are high frequency effects. It also causes immune system collapse and children often have to spend months at a time in germ free zones. However, these effects may seem inconsequential compared with the riches of life thus saved.

In one Australian case, parents of a girl with leukemia felt otherwise. On discovering she had leukemia, they decided to give themselves six weeks to experiment with megadoses of vitamin C. They gave her 20 gm a day and six weeks later her blood counts were back to normal. Anecdotal? Undoubtedly. But nevertheless, for me, it is persuasive. Leukemia has a number of symptoms that are identical to scurvy so the vitamin C option should not be discounted out of hand.

The failures of chemotherapy

Even such a cancer research establishment figure as Harvard Medical School's Geoffrey Cooper has had to admit the poor prognosis for the chemotherapy treatment of most cancers, 'Unfortunately, curative chemotherapy for most common adult malignancies (eg breast, colon and lung carcinomas) remains elusive.' he says in The Cancer book. 'Chemotherapy of metastatic disease usually

fails...Advances in chemotherapy have led to successes against a few malignancies, but not against the majority of common cancers.'

Nevertheless, chemotherapy remains a form of treatment that is commonly prescribed for all sorts of cancers. In many cases doctors will point to its evident effects on chemical markers indicating the presence of cancer. But these effects are almost always too temporary. This must be a very frustrating experience for oncologists but it is certainly no reason for them to persevere in this futile exercise - yet persevere they do.

Why is chemotherapy still so commonly used?

The simple fact is: chemotherapy is big business. In 1989 the chemotherapy business was worth US\$2,400 million to the pharmaceutical companies.

To give some idea of the extent of those resources, every year more than 50,000 materials are tested. In fact, the major proportion of the money donated to cancer research goes to the search for chemotherapeutic drugs. It's a lucrative business for the institutes engaged in cancer research. It's also a lucrative business for private oncologists. There have been accusations that patients have been put on ineffective low doses for long periods of time just to ensure the patient keeps coming back. No-one wants to kill the goose that lays the golden egg. This may seem like a cheap and unsupported accusation against respectable, hard working doctors. Yet doctors have not been shy in stating publicly that it is better for a patient to be kept uselessly on a regime of chemotherapy rather than allow them to explore the unorthodox avenues. Dr Charles Moertel of the prestigious Mayo Clinic investigated the value of one of the most common of chemotherapy agents, 5-FU in combination with other chemotherapy agents, and found that only about 15-20 percent of patients with gastro-intestinal cancers had any form of response and that for most of them these responses were only partial and transient.

There is no solid evidence that treatment with (5-FU and related compounds) contributes to the overall survival of patients with gastrointestinal cancer regardless of the stage of the disease at which they are applied. (Moertel, (1978) quoted by Pauling 1986)

Moertel also, according to Pauling, came to the same conclusion with regard to the effect of 5 FU in combination with other chemotherapeutic agents for a variety of cancers from the throat to the rectum and came to the same conclusion. It would seem to follow that 5-FU and related chemotherapeutic agents were contra-indicated for these cancers. But Moertel goes on to say:

By no means however should these conclusions imply that these efforts should be abandoned. Patients with advanced gastrointestinal cancer and their families have a compelling need for a basis of hope. If such hope is not offered, they will quickly seek it from the hands of quacks and charlatans. (Moertel, (1978) quoted by Pauling 1986)

Moertel was writing in 1978. In 1994, *Everyone's Guide to Cancer Therapy*, the official version of orthodox cancer medicine as seen fit for the un-medically-qualified member of the general public mentions the use of 5 FU with the following cancers: anal, bile-duct, bladder, breast, cervical, colorectal, esophageal, gall bladder, gastrointestinal tract, head and neck, liver, ovarian, pancreatic, penile, small intestine, stomach, uterine, vaginal, and vulvar. To be fair, it doesn't always recommend its use. For example, in the case of bile-duct cancer it says: 'Studies have not shown that chemotherapy can prolong survival, but the standard drugs used (mitomycin-C or 5-fluorouracil) may cause tumours to shrink and help about 25 percent of patients. ... however, patients may not be

better off after chemotherapy. The treatment has side effects and the tumor ultimately regrows.’ (Dollinger et al, 1994)

Therefore, in the opinion of the best informed doctors is that 5 FU doesn't work - and yet it is still sufficiently commonly used to be called a ‘standard drug’ used for the treatment of a number of cancers. New claims are now being made for the combination of 5 FU with levamisole for a number of cancers - there are claims of a 30 percent reduction in tumour recurrence over 5 years for colon cancer, for example. But, as we have seen earlier, five year survival rates cannot be trusted.

The message seems to be: It hasn't worked so we must try harder to make it work. It is extremely worrying that the medical profession seems so wedded to chemotherapy that they would rather use a useless chemotherapeutic agent - or convince themselves of the value of an agent - than contemplate looking at alternative therapies.

But why doesn't chemotherapy work?

The main problem is resistance. Chemotherapy is often quite successful at first. After its use the tumour shrinks and there is a decline in the chemical markers in the blood. These markers are indications of the cancers presence and degree of activity. But then, even though the drugs are still being given, there is a relapse and the cancer starts to grow again.

Resistance is not only very common it is the normal result. This has led doctors to use two or more chemotherapy agents in combination. The problem is that once resistance to one drug combination occurs there is an increased likelihood that there will be resistance to other combinations.

Cancer cells resist chemotherapy by a process known as gene amplification. This is what cancer cells do anyway. So chemotherapeutic drugs are making the cells more cancerous. The more they are attacked the stronger they get. In addition, some chemotherapy drugs, known as alkylating agents, are known to cause bladder cancer and leukemia.

This is recognised by the experts. In 1985 a prominent cancer researcher named Robert T. Schimke publicly announced the problem in a lecture he gave at the National Institutes of Health. The problem, he explained, is that cancer cells resist chemotherapy, and that resistance mimics the very processes of cancer itself. As a result, chemotherapy tends to make cancer worse.

Why are doctors still using chemotherapy?

This is a very good question. It is clear that chemotherapy is a paradigm that is very attractive to anyone engaged in cancer treatment. Give the patient a powerful drug and make the disease go away. The more powerful the drug the better. Powerful drugs enhance the doctor's status.

But that is not the only reason. Critics of chemotherapy have alleged far more damning reasons for the continuing use of toxic chemical agents. One critic Dr Alan S. Levin accused the pharmaceutical industry of manipulating special interests into coercing doctors to use chemotherapeutic drugs. One way is through medical insurance. In California, doctors who use 5-FU to treat colon cancer will be reimbursed even though it is widely accepted that 5-FU doesn't work. If he uses high doses of vitamin C he will not be reimbursed. In fact, he will be in extreme danger of losing his medical licence. In Britain, the tie up between the pharmaceutical companies and the NHS monolith effectively means that hospital doctors have very little chance to voice anti-chemotherapy sentiments. We should note here that Britain's leading cancer research charity, the Imperial Cancer

Research Fund, dedicates the vast majority of the funds it receives to chemotherapy research. It also has very close links to its parent: Imperial Chemical Industries (ICI). Surely, this is hardly a coincidence.

Levin also accuses the drug companies of manipulating their experimental results. How is this done? According to Dr Levin, any patient who dies during a trial of a drug is eliminated from the results. So too in many cases are groups of patients who do not show good responses. By concentrating only on the group who respond well and eliminating all the others the drug will appear to be more effective generally than it really is. Even then, the final results very rarely show more than a few percent improvement in live expectancy or tumour-free survival.

So, who is this crank who suggests that pharmaceutical companies doctor their clinical trial results and then coerce doctors to perform medically useless and highly dangerous treatments? At the time of these remarks Dr Levin was Adjunct Associate Professor of Immunology and Dermatology at the University of California, San Francisco, School of Medicine. He is no alternative 'quack'.

On examining this evidence, I can come to no other conclusion than that chemotherapy is a dangerous and desperate approach to the treatment of any cancer except for the treatment for a few childhood and lymphatic cancers where its benefits have been well-established.

Sadly, the oncologist, talking privately face to face with the patient, who recommends chemotherapy, as a wise precaution perhaps, will always carry a lot of weight. But do oncologists with cancer themselves opt for chemotherapy? No they don't. In 1986, 118 doctors who routinely recommended patients for clinical trials involving chemotherapeutic agents were asked to imagine that they had cancer, which of six chemotherapy treatment plans would they choose for themselves. Only 79 replied and of these, 58 said they would choose none. The reasons they gave were the ineffectiveness of chemotherapy and the unacceptably high degree of toxicity.