

The healing power of stem cells: why we need rules

To the Editor: Imagine a world where the promise of stem cells has been realized. It would be possible to cure almost all ailments (serious and not so serious) either by giving you stem cells, by giving you dietary supplements that would flood your system with stem cells, or by ordering ready-made organs on demand (an idea which you may have been exposed to if you have seen the film “The Island”). We would be able to cure diabetes, repair injured spinal cords, help the blind to see, treat Alzheimer’s disease, multiple sclerosis and, possibly, even reverse aging. “At last,” we would say, “all that I have been promised for so long is now within my reach”.

Now imagine a world in which your healers are more interested in their own financial gain than they are in your well-being. A world in which emotional vulnerability is exploited by people who promise miraculous cures for almost every disease under the sun, but are unable to deliver on their promises. A world into which you could easily be lured by clever marketing and calculated evasion of the truth. Not a comfortable thought.

“But would people really do this?” you might ask. “Surely this is unethical? Surely I can rely on the State and other regulatory authorities to prevent this?”

Stem cells are used every day, all over the world, to legitimately treat hundreds of very ill patients, and the results are generally very good. A successful outcome is the rule rather than the exception. I am talking here about bone marrow transplantation, which is used to treat blood cancers and several other diseases. I am also talking about wounds and chronic skin ulcers, and also about broken bones.

Stem cells are used every day to treat these conditions. This is legitimate, tried and proven, and in most cases well worth the expense.

What I am not talking about are the problems alluded to above: diabetes, blindness, paralysis, dementia, etc. Yet, if you were to go onto the internet today, you would find many institutions that promise all of that, and much much more; which is one of the reasons we need rules: to protect the emotionally vulnerable who desperately want to be cured and who honestly believe that by paying R150,000 – R300,000 to their healers they will be cured. “Surely at this price I will get value for my money?”

We all know of the benefits that can be derived from the power of positive thinking, from mind over matter. “Surely if I believe strongly enough in this, and call on divine powers along the way, I will be cured?” Regrettably, the answer is: not necessarily. Careful discernment is needed to separate truth from cleverly disguised untruth.

This, of course, is very difficult to do if you are inadequately informed. So, first and foremost, rules are needed to protect the patient, the consumer. It is now well-established that the absence of rules permits (and even encourages) the emergence of medically-unsound and unethical practices that may be associated with the exploitation of emotionally vulnerable patients. It is the duty of the State, and the relevant professional bodies, whose very existence is motivated by the need to protect the patient, to provide these rules.

Several sets of international guidelines have also been published to guide patients and health care professionals through these treacherous waters.

Second, rules are needed to ensure that pre-clinical studies and well controlled clinical trials have been conducted prior to introducing cells into the patient. This is necessary to ensure that the purported therapeutic effect of the cells received is real.

The ultimate aim of stem cell therapy is to maximize normal structure and function and there must be well proven records that indicate that the desired therapeutic effect will, under normal circumstances, be achieved.

Pre-clinical studies are also done to ensure that there are no serious side effects. There are reports of patients who have developed serious side effects from cells whose safety profile had not been adequately tested prior to administration. One dramatic example is of a young boy who developed a multi-focal brain tumour following treatment in Russia with human foetal neural (brain) stem cells that were administered directly into his brain and spinal cord. The boy had a series of three treatments and, four years after the first treatment, developed symptoms which led to the diagnosis of tumours at the sites of injection, originating from the injected cells. This was the first time that a patient with his condition had been treated in this way. Not only was the safety of the procedure unproven, but there was no evidence, including experimental or pre-clinical, to indicate that the therapy might work.

Third, rules are needed to ensure that work involving stem cells that will be (re)introduced into patients is conducted in an accredited institution under strictly controlled conditions.

This ensures that the material that is to be (re)introduced is not contaminated, and thereby avoids the unintentional transfer into patients of harmful material (infectious and otherwise) that may be picked up along the way if stem cells are handled in an unclean environment.

These are some of the reasons why it is necessary to have appropriate legislation in place. Although we are a little behind in this regard in South Africa, the good news is that there is a team of dedicated individuals working hard to ensure that this legislation will soon be in place.

Can we still hope for a world in which the promise of stem cells will be realized? Yes, we most certainly can, and hope, as we know, is a very powerful tool in the maintenance of physical, emotional and spiritual health.

But, in hoping, we should also strive to maintain a balance between reality and fantasy, and not allow the one to spill over into the other, making ourselves vulnerable to the seductive lure of fundamentally dishonest and unethical practices.

-Prof. Michael S. Pepper

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