Think before you ruin your patient's chance of parenthood

Prize for journalist who highlighted poor practice in Poland

The plight of cancer patients for whom treatment means risking losing the opportunity to have children was taken up in Poland by the leading national daily *Gazeta Wyborcza*, in a piece that earned reporter **Sławomir Zagórski** a Best Cancer Reporter Award. The article, titled "I had cancer, I'm going to be a Dad," is reprinted below.

In Poland, being cured of cancer can often mean being sentenced to infertility. The price paid for intensive cancer therapy hits young people just starting out in life especially hard. But it doesn't have to be that way.

"These days, patients treated for cancer can in most cases conceive and give birth to healthy children," insists Professor Mariusz Bidziński, Chairman of the Polish Association for Oncological Gynaecology and Head of the Gynaecological Cancer Clinic at the Warsaw Cancer Centre, "There is, however, one condition – action needs to be taken before, rather than after, starting cancer treatment," explains the specialist.

But in Poland few people give it any thought. Patients are terrified by the diagnosis, and their main concern is to save themselves. According to Bidziński, they are rarely told that treatment can result in infertility. Doctors tend to focus on treating patients, rather than worrying about what might happen to them a few years down the line.

"Not a single one of my colleagues at the Warsaw Cancer Centre has ever come to seek my opinion on this matter," says Bidziński. "Some of them are treating young women who, after therapy, can forget about becoming mothers," he adds.

"In Germany, France, the Benelux countries or the USA, a discussion is held with the patient about whether, after successful cancer treatment, he or she is going to want to have children – this is standard procedure," says Dr Kamil Zalewski, who works at Bidziński's clinic. "Not only that, but if a doctor in one of our western neighbours should forget to raise the subject in talks with the patient, he or she may well have to answer for it before the courts," Zalewski points out. "And here in Poland? Forget it!"

Maybe Polish specialists would be willing to refer at least younger patients for consultation, but where to? In our country we don't have a single centre where a frightened young man or woman can seek comprehensive help, where they can talk about becoming a parent, not just with a cancer specialist but also, for example, with a specialist in infertility treatment or a psychologist. A few well-informed – and well-off – patients seek help of their own accord from private *in-vitro* fertilisation clinics.

Sławomir Zagórski

gazeta WYBORCZA.PL

Many techniques are available to enable cancer patients to keep open the option of having children even if the treatment renders them infertile. This article looks at what must change in Poland to ensure patients get the chance to make use of these techniques in time


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A WORD ABOUT BONE-MARROW TRANSPLANTS

Diseases whose treatments lead particularly frequently to infertility in both sexes include cancers requiring bone-marrow transplantation (certain forms of leukaemia or lymphomas, e.g. Hodgkin's disease) and also some sarcomas. The chances that a twenty-year-old woman, after undergoing cancer treatment, will get pregnant spontaneously (i.e., without medical help) are as a rule no more than five per cent. "The cancer itself doesn't have to affect the reproductive system – the ovaries or uterus," explains Zalewski. "Aggressive chemotherapy, in cases of breast cancer for example, is frequently all it takes for the ovaries to stop working. And when they do stop working, it not only means the end of all dreams of motherhood, it also means a fall in oestrogen production and early onset of the menopause," he adds.

Men are not spared either. If, for example, a twenty-year-old man has to have a bone-marrow transplant, doctors must first completely destroy his own diseased bone marrow, using drugs or radiation. In four cases out of five, such pre-transplant radiation conditioning fatally damages the delicate Leydig cells in the patient's testicles. If the patient does manage to survive the cancer, in 80% of cases his semen will never again contain even a single sperm cell.

In patients with testicular cancer (a disease that affects mainly young men) chemotherapy and specialist surgical procedures on abdominal lymph nodes can reduce the ability to procreate.

PREGNANCY FROM THE FREEZER

What can be done, given that the cancer has to be treated?

The first thing to do is talk to the patient. Ask whether, after successful treatment, he or she is planning – even if only tentatively – to have children. "At least half the young people [up to the age of 35] in Poland who suffer from cancer– i.e. 3000 a year – will answer such a question affirmatively," says Bidziński.

If a patient expresses the wish to become a parent, then action needs to be taken – and without delay, because cancer doesn't wait.

In the case of men, the situation is relatively straightforward. All that is required is an andrological examination to check that the semen contains sperm cells, after which the semen is frozen. This can be safely stored in liquid nitrogen for years.

With women, it is more difficult, but in this area medicine is constantly coming up with new methods of dealing with the situation. One method relies on

"Ask whether, after successful treatment, he or she is planning – even if only tentatively – to have children"

freezing egg cells, though unfortunately this is still meeting with considerable resistance (barely a few hundred successful pregnancies have been achieved this way across the world). Incomparably simpler is the business of freezing ready embryos, but obtaining such an embryo also requires a sperm cell. If a young woman already has a husband or partner, the couple can decide to have embryos prepared and freeze them. If she doesn't have a partner, she can elect to be fertilised by sperm from an anonymous donor, though such a solution is, of course, not for everyone.

For some years now, doctors have been (successfully) testing a new method of preserving fertility in women undergoing chemo- or radiotherapy. Before the treatment, the surgeon cuts out one of the ovaries (or a fragment of one) through a small incision in the abdomen, and removes tissue from it, which is cut into thin strips and then frozen. After the anti-cancer treatment is completed, and once it is certain that the patient has completely recovered from the disease, the tissue can be thawed, checked to confirm that there are no cancer cells present, and grafted onto the remaining ovary. It transpires that the thawed tissue gets to work and is soon able to produce normal egg cells.

This technique was pioneered by Professor Jacques Donnez of the Catholic University in Louvain (Belgium). An article six years ago in *The Lancet* brought news of the first baby to be born in his clinic following freezing and transplantation of fragments of ovary. Jacques Donnez's patient had been suffering from Hodgkin's disease. Four months after grafting the fragments of preserved ovary, the patient's periods returned, and a few months later she went into labour perfectly naturally, without having to resort to *in-vitro* techniques.

Since 2004 many more babies have come into the world from frozen and thawed ovary tissue – in Poland, no-one has tried it yet.

What about the youngest patients?

Freezing ovarian tissue should in future offer hope of motherhood even for young girls who have yet to enter puberty (children get cancer too – in Poland there are about 1200 new patients a year). Doctors are hoping that immature egg cells recovered from such tissue will one day serve for *in-vitro* fertilisation.

Specialists are also looking at ways to help boys who are not yet producing sperm cells. Researchers in Israel are freezing testicular tissue fragments collected from very young cancer patients. It is not yet known whether this technique will work, but trials are continuing.

One thing that can be done without difficulty, even now is the fairly simple procedure of moving women's ovaries away from irradiated areas – in cases of cervical cancer, among others (such procedures are being performed in Poland; no need here for any major operation, as access to the ovaries can be obtained through two small openings in the abdomen).

Doctors are also experimenting with removing only the cancerous tissue rather than the entire uterus where the cancer is caught early, again with a view to preserving patients' future ability to parent children. Such conservative procedures have made possible the birth of almost 500 babies around the world (two of them in Poland).

Cancer and in-vitro techniques

One of Bidziński's dreams is the creation of a centre in Poland that would be responsible for the complex care of young cancer patients wanting to become parents in the future. "All it would take would be a measure of good will on the part of the authorities, a bit of equipment and some funding," the specialist argues. "Patients would be treated for cancer where they live, and they would come here purely for consultation and possibly to have their semen, egg cells or fragments of ovary collected."

The question arises, however, as to who is going to pay for such services and for the cost of storing patients' tissues. "Despite the fact that we have been trying for years to persuade patients to make use of sperm banks, very few do," maintains Dr Iwona Skoneczna of the Warsaw Cancer Centre.

At present, Poland is still not providing any kind of help to its infertile citizens. Yet, as if not enough money were already being spent on cancer treatment, cancer patients can still demand help for later infertility treatment.

"Paradoxically, it could be cancer patients who are eventually the first to benefit from such help," Bidziński speculates. "After all, hasn't fate already given them a raw deal? Perhaps we who are healthy and happy in our lives could devote a little of our money and energy to helping them out."

This article was first published in *Gazeta Wyborcza* on 27 August 2009, and is republished with permission