Too heavy to save or be saved

Ian Patton was eager to donate some of his stem cells after reading about how a similar gift saved the life of a 15-month-old baby boy. He promptly contacted Canadian Blood Services' OneMatch program and was shocked to discover that his weight, about 147.7 kg, made him ineligible to donate.

"As it turns out, I'm too fat to save a life," he says.

Meanwhile, Kim Aziz, a 48-year-old single mother with end-stage renal disease (ESRD) discovered that her weight made her too heavy to be saved. She has spent the past nine years on dialysis but recently, a family member agreed to become a living kidney donor. They soon discovered a snag. The renal transplant team at the Ottawa Hospital in Ontario refused to even see her unless she trimmed about 28 of her 137 kg weight, which, in a best-case scenario, would take at least six months.

Dr. Deborah Zimmerman, nephrophologist and medical director of Ottawa's home hemodialysis unit worries that Aziz is running out of time. "Kim's vascular access is becoming more and more difficult, and without a transplant, she's ultimately going to die early."

The two cases have left some wondering whether considerations other than patient safety are driving events in the world of transplantation.

The failure to provide a surgical consultation for Aziz is particularly worrisome, says Dr. Rebecca Puhl, director of research and weight stigma initiatives at the Rudd Center for Food Policy & Obesity at Yale University in New Haven, Connecticut. "This is a really tragic case of what I think is weight discrimination."

"If we look at the bigger picture of this, we know that weight stigma is very prevalent in the health care environment, and that this plays out in numerous ways," Puhl adds. "Sometimes it's very overt and occurs in patient–provider interactions and sometimes it occurs on a much more complex level related to access to treatment, denial of services, and it gets couched in this more complex conversation of medical risk, and justification of all of these different, safety issues. But then, we really have to make sure that that's legitimate as in some cases there may be legitimate medical risks. But in some cases, there may not."

When potential kidney recipients are required to lose weight before being provided surgical consultations, are they victims of weight discrimination?

Such risks appear to be at the heart of OneMatch prohibitions against stem cell donations by people with a body mass index (BMI) greater than 40 kg/m^2.

The weight cutoffs are in place for reasons of patient safety and in line with those of the United States National Marrow Donor Program and the World Marrow Donor Association, says Dr. Dale Towns, medical director at Canadian Blood Services. Asked if evidence exists in support of that policy for both donors and recipients, Davis replied: "not recipient, except in the instance that the collection isn't completed, but

no, for us to have that kind of data we would have to do a whole bunch of collections with a BMI over 40."

Arguably, weight cutoffs for stem cell donors might have been justified in years past, when harvests were generally made from the region surrounding the iliac crest, which, with heavier donors, is more challenging to reach. But 83% of donations are now peripherally collected.

Nevertheless, risks remain, says Dr. Dennis Confer, chief medical officer of the US National Marrow Donor Program and vice-president, North and South America, of the World Marrow Donor Association. Those include concerns surrounding more difficult venous access, the potential need for more frequent use of central venous lines, and nonlife-threatening side-effects (typically bone pain) associated with five-day administration of filgrastim, which is used to increase bone marrow production, and dosed according to body weight.

Patton says he'd have risked those consequences but Confer argues that even patients who are willing to take their chances should be prevented from making stem cell donations. "If you're really making an exception that goes outside of what you've established as your safe boundaries, then I think that the physicians have a duty to their donors to not let the donor even agree to do something that may be too risky for that person."

The same is true of kidney recipients, argues Dr. Greg Knoll, medical director of renal transplantation at the Ottawa Hospital. "Patients with obesity are at increased risk for complications following kidney transplantation," he writes in an email. "As such, we review weight and BMI closely before deciding on suitability for transplantation. … Those with a BMI above 40 have their evaluation deferred until they have lost weight. Once they have lost weight their evaluation will be initiated."

That's standard practice for all but one of Ontario renal transplant programs, Knoll adds. The guidelines appear to be based on such evidence as a retrospective follow-up on the impact of obesity on the outcome of kidney transplantation which indicated that the risk of graft loss without patient death increased by 30% for individuals whose BMI exceeds 30 (*Transplantation* 2011; 91[8]:869-74).

While presurgical weight loss may decrease that, it arguable that waiting for a patient to lose weight carries as much or greater risk, in that a study of over 73 000 renal transplants determined that waiting times of 0 to 6 months, 6 to 12 months, 12 to 24 months, and over 24 months, respectively conferred a 17%, 37%, 55%, and 68% increase in risk for graft loss after transplantation (*Kidney Int* 2000; 58:1311–17).

The question then becomes: Does a surgical consult weight limit bias against the obese or is it merely a function of prudence?

Zimmerman notes that patients with diabetes or hepatitis C aren't precluded from surgical consultations or transplants, even though they have comparatively poor post-operative outcomes. She suspects perioperative concerns about patients with obesity aren't related to increased mortality, but rather, morbidity. "I think it's issues such as wound dehiscence, lympoceles and urine leakage."

All that suggests a double standard, Zimmerman adds. "The problem is, we don't tell people with diabetes that they can't have transplants, even though we know overall the graft won't do as well as if we gave it to someone who didn't have diabetes. Same thing with people who have hepatitis C."

In short, there's no excuse for denying a surgical consult for potential kidney recipients even if they have a BMI higher than 40, after which there should be "a review of the risks and the benefits" and a decision made, Zimmerman says.

Instead, Aziz is on a medically supervised liquid diet, hoping to trim enough pounds before May 2012, after which her living donor will be unable to gift a kidney because of work responsibilities. Aziz wonders whether being given a chance to make her case might have an impact, or whether she's simply a victim of weight discrimination. "People every day who are heavy have operations for whatever reason. And whether they think they're throwing away an organ on me, that I'm not worth it, I don't know. But that certainly crosses my mind." — Yoni Freedhoff MD, Ottawa, Ont.

***CMAJ* 2011. DOI:10.1503/cmaj.109-3957**