Director of Education
The National Catholic Bioethics Center

December, 2022

Dissolving the Dead

"We can ask whether alkaline hydrolysis or liquification of the human body meets the standard of reverent treatment of our earthly remains."



In recent years, a number of US states have legalized a new way to process human corpses that some have called "dissolving the dead." Its technical name is "alkaline hydrolysis," but it is also known as biocremation, aquamation, green cremation, and resomation.

The basic process involves placing a body in a heated, pressurized metal chamber and hastening its decomposition by adding lye (water mixed with a small quantity of potassium hydroxide or sodium hydroxide) to break down proteins, fats, DNA, etc. This rapidly digests the tissues of the body and reduces it to skeletal fragments. The procedure, which some claim is merely an accelerated version of what happens if you're buried, requires 3 to 4 hours.

Afterwards, the dissolved tissue, a brown soup comprised of simple organic materials like salts, sugars and lipids is released from the machine into a drain, then into the sewer system before it makes its way to water treatment facilities. The leftover bone fragments inside the machine are collected, ground up and, as in standard cremation, pulverized into a powder (colloquiand imprecisely termed "ashes"), which can be given to the family in an urn.

For alkaline hydrolysis, many instinctively object that dissolving

bodies in a vat of chemicals and pouring the resultant liquid down the drain is not a respectful way to dispose of our loved ones' remains, because it seems to treat their bodies as waste to be flushed away.

Others note that standard embalming involves similar steps, as the drained blood and viscera that are extracted through the aspiration of the body cavities are also sent down the drain. The idea of flame cremation, they add, raises parallel concerns, as numerous parts of a person's body are degraded and flare up a pipe or chimney into the atmosphere.

As a society we have laws prohibiting desecration of the human body, illegal burial, and other abuses against the human body, and we can ask whether alkaline hydrolysis or liquification of the human body raises any of the same concerns and whether the process meets the standard of reverent treatment of our earthly remains.

Because of the novelty of alkaline hydrolysis, the Catholic Church does not yet have an official teaching that addresses the practice. Instead, the Church stresses the importance of showing careful regard for human remains and honoring the memory of the deceased. These

Making Sense of Bioethics

Dissolving the Dead

considerations should influence our decisions as Catholics when we are offered options like cremation or alkaline hydrolysis. Neither intrinsically evil, but each can lead to abuses and provoke misunderstandings about our human nature. In an age in which many misidentify the human person as only corresponding to the soul, without recognizing the sacredness of the human body, the Church tries to emphasize the importance of fullbody burial as the best way to assure loving homage towards those who have died as well as witnessing to our belief in bodily Resurrection.

Both cremation and alkaline hydrolysis, meanwhile, bring with them the potential for irreverence and a certain casualness when it comes to attending to human remains.

After cremation, rather than being reverently disposed, ashes are often kept in the attic or in the living room on the fireplace mantel, something that would never be done with a whole human body. Instead of being reverently reserved in the consecrated ground of a cemetery, our loved one's remains may be subjected to unbefitting or even superstitious treatment. At a deeper level, do we minimize or even negate someone's embodied human reality when we dissolve them in lye, or incinerate

them in fire?

On the other hand, when the whole body is buried in the ground, there is a greater sense of connection to those mortal remains, which speak to us of the full embodiment of the person who once lived and breathed as we do, body and soul.

These notable differences in terms of according respect towards the deceased means that we should generally prefer whole body disposition of human remains, as the Church recommends, even though extenuating circumstances can allow for cremation and, until the Church formally teaches otherwise, alkaline hydrolysis. I believe it is unlikely the Church will ultimately counsel or encourage the use of this latter method for laying our loved ones to rest after death.

When alkaline hydrolysis is carried out, the same basic principles that are at work in cremation to protect human dignity should be applied. Bone fragments, powder and ashes left over from the process should be placed in a suitable container like an urn, and not scattered or divided among family members. The urn should be interred in the family plot, a mausoleum, or a columbarium. This establishes a specific point of reference in time, space and geography where we can commemorate our de-

ceased family members. In this way, we are not only invited to respect their mortal remains, but also to pray for the repose of their souls as we mourn their passing in the hope of Resurrection and beatitude.

Rev. Tadeusz Pacholczyk, Ph.D. earned his doctorate in neuroscience from Yale and did post-doctoral work at Harvard. He is a priest of the diocese of Fall River, MA, and serves as the Director of Education at The National Catholic Bioethics Center in Philadelphia. Father Tad writes a monthly column on timely life issues. From stem cell research to organ donation, abortion to euthanasia, he offers a clear and compelling analysis of modern bioethical questions, addressing issues we may confront at one time or another in our daily living. His column, entitled "Making Sense of Bioethics" is nationally syndicated in the U.S. to numerous diocesan newspapers, and has been reprinted by newspapers in England, Canada, Poland and Australia.

