

# *Hypodermoclysis and Proctoclysis as Basic Care*

## *Avoiding Unnecessary Terminal Dehydration*

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*Abstract.* A wide variety of clinical situations can lead to the implementation of assisted nutrition and hydration (ANH). Both enteral ANH and parenteral assisted nutrition and hydration (PNH) serve to nourish and hydrate those who are incapable of normal eating and drinking. Although PNH via the intravenous (IV) route is comparable to enteral ANH in its intention, IV PNH bypasses the relevant body system—the digestive tract—entirely. Consequently, IV PNH is ethically comparable to mechanical ventilation and thus can be withheld or withdrawn following the ethical criteria that apply to any other extraordinary therapeutic measure. However, other alternatives to oral and enteral hydration that are proportionately less challenging than IV PNH (i.e., hypodermoclysis and proctoclysis) should be further evaluated as potentially ordinary means of keeping patients adequately hydrated at the end of life. *National Catholic Bioethics Quarterly* 11.4 (Winter 2011): 649–659.

As the baby boom generation enters retirement age and upheavals in our health care system loom on the horizon, many are questioning long-held assumptions about the care of those approaching the end of life.<sup>1</sup> In particular, both the general public and

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<sup>1</sup>Lorraine C. Mion and Anne O’Connell, “Parenteral Hydration and Nutrition in the Geriatric Patient: Clinical and Ethical Issues,” *Journal of Infusion Nursing* 26.3 (May–June 2003): 144–145.

health care clinicians continue to question the necessity or even wisdom of ensuring ongoing provision of food and fluids throughout the lifespan of a patient, especially when it requires medical assistance. This is particularly true in the wake of the tragic story of Terri Schindler Schiavo that unfolded under the gaze of the nation via television and other media.<sup>2</sup>

### **Basic Principles of Assisted Nutrition and Hydration**

Food and water are necessary for sustaining life, promoting healing, and relieving suffering.<sup>3</sup> Indeed, human beings can only survive approximately seven to ten days when deprived of nourishment.<sup>4</sup> Regardless of a patient's prognosis, the provision of food and water, to be consumed orally by the recipient, is universally considered a fundamental element of ordinary health care, along with hygiene, warmth, and skin care.<sup>5</sup> Frequently, a pathological condition, whether permanent or temporary, makes it impossible for an individual to consume adequate food and fluids in a commonplace manner.<sup>6</sup> In such situations, assisted nutrition and hydration (ANH) can be implemented to sustain life and relieve suffering.<sup>7</sup> It is often a temporary measure designed to sustain a patient during a period of intense illness or recovery.<sup>8</sup> Under certain conditions, it can also become a permanent means of nourishing a patient, particularly in cases of severe neurological injury or in the later stages of dementia.<sup>9</sup>

Depending on the clinical situation and the patient's nutritional needs, a variety of ANH methods are available that can be neatly divided into two main categories: those methods that deliver nutrients and fluids directly into a functioning gastrointestinal (GI) tract (e.g., tube feeding), and those methods that deliver nutrients in some

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<sup>2</sup>See William E. May, *Catholic Bioethics and the Gift of Human Life*, 2nd ed. (Huntington, IN: Our Sunday Visitor, 2008), 293.

<sup>3</sup>National Conference of Catholic Bishops Committee for Pro-Life Activities, *Nutrition and Hydration: Moral and Pastoral Reflections* (April 2, 1992), n. 3.

<sup>4</sup>Patrick Guinan, "Is Assisted Nutrition and Hydration Always Mandated? The Persistent Vegetative State Differs from Dementia and Frailty," *National Catholic Bioethics Quarterly* 10.3 (Autumn 2010): 486.

<sup>5</sup>Els Bryon, Chris Gastmans, and Bernadette Dierckx de Casterlé, "Involvement of Hospital Nurses in Care Decisions Related to Administration of Artificial Nutrition or Hydration (ANH) in Patients with Dementia: A Qualitative Study," *International Journal of Nursing Studies* 47 (September 2010): 1106.

<sup>6</sup>Donna D. Ignatavicius and M. Linda Workman, *Medical Surgical Nursing: Patient-Centered Collaborative Care*, 6th ed. (St. Louis, MI: Saunders Elsevier, 2010), 1396.

<sup>7</sup>Mark A. McCamish and Nancy J. Crocker, "Enteral and Parenteral Nutrition Support of Terminally Ill Patients: Practical and Ethical Perspectives," *Hospice Journal* 9.2–3 (1993): 108.

<sup>8</sup>Anne Griffin Perry and Patricia A. Potter, *Clinical Nursing Skills and Techniques*, 7th ed. (St. Louis, MI: Mosby Elsevier, 2010), 849.

<sup>9</sup>Ignatavicius and Workman, *Medical Surgical Nursing*, 1396; and John S. Howland, "A Defense of Assisted Nutrition and Hydration in Patients with Dementia," *National Catholic Bioethics Quarterly* 9.4 (Winter 2009): 697–698.

other way, usually via parenteral means that bypass the alimentary canal altogether (e.g., intravenous infusion).<sup>10</sup>

Enteral ANH involves bypassing portions of the upper GI tract by means of a tube introduced through the nose or throat or directly through the abdomen.<sup>11</sup> The tube then becomes a conduit through which liquid nourishment is introduced directly into the stomach or small bowel, and then the nutrients are assimilated by normal digestive function.<sup>12</sup>

While many seek to classify enteral ANH as medical treatment because of the advanced technology involved, tube placement and utilization is in fact fairly straightforward and routine.<sup>13</sup> Access to the GI tract via the abdomen does require a minor surgical or endoscopic procedure, but this can be accomplished in an outpatient setting with local anesthesia and sedation in less than an hour.<sup>14</sup> Access to the esophagus via the patient's nose or mouth is usually a nursing function that can be completed at the bedside.<sup>15</sup> Regardless of the route, once the tube is in place, the actual feeding procedure is simple enough that family members and the patients themselves can carry it out without difficulty. Using clean technique, the one providing the feeding measures out the required amount of formula and then pours it into the external end of the tube by means of a funnel or large syringe.<sup>16</sup> In certain cases, a pump is required to deliver nutrients over night or around the clock, but again, the techniques involved are straightforward. Risks of aspiration, infection, fluid or nutrient imbalances, and other possible complications can be managed and monitored by trained personnel or family members, and in any case those risks are far outweighed by the benefits of continued sustenance of the patient.<sup>17</sup>

Enteral ANH relies on a functioning GI tract, in whole or in part, and is always preferred to nonparenteral administration of nutrients: "The rule of thumb is: if the gut functions, use it!"<sup>18</sup> Consequently, when a patient's GI tract is diseased or otherwise not functioning, or the patient's clinical condition calls for an extended bowel rest, enteral ANH is not an option for providing nutrition and hydration.<sup>19</sup> In such situations, parenteral assisted nutrition and hydration (PNH) can completely bypass the digestive tract and deliver fluids and nutrients into the bloodstream via a direct intravenous (IV) route or (in the case of fluids alone) via an indirect route by means

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<sup>10</sup> Guinan, "Is Assisted Nutrition and Hydration Always Mandated?" 486.

<sup>11</sup> NCCB, *Nutrition and Hydration*, Appendix.

<sup>12</sup> McCamish and Crocker, "Enteral and Parenteral Nutrition Support," 109–110.

<sup>13</sup> NCCB, *Nutrition and Hydration*, Appendix.

<sup>14</sup> Howland, "A Defense of Assisted Nutrition and Hydration," 698.

<sup>15</sup> Perry and Potter, *Clinical Nursing Skills*, 829–834.

<sup>16</sup> *Ibid.*, 840–845.

<sup>17</sup> *Ibid.*

<sup>18</sup> McCamish and Crocker, "Enteral and Parenteral Nutrition Support," 109.

<sup>19</sup> Perry and Potter, *Clinical Nursing Skills*, 849.

of absorption through mucous membrane or subcutaneous tissue.<sup>20</sup> Whatever form PNH takes, it does not require a functioning GI tract, and thus it can completely replace digestion, an essential bodily function. Thus, despite being very similar to enteral ANH as an alternative means of feeding and hydrating those who are sick and debilitated, PNH is very different in that it does not make use of the normal physiological means of assimilating nutrients.

The IV forms of PNH include partial parenteral nutrition (for supplemental or short-term therapy), total parenteral nutrition (for intense or long-term therapy), and simple IV fluid replacement, which may also include electrolyte replacement.<sup>21</sup> The hyperosmolarity of total parenteral nutrition requires that it be administered through a central venous catheter, usually directly into the superior vena cava, while partial parenteral nutrition and IV fluid replacement generally can be administered through a peripheral IV catheter.<sup>22</sup> Concomitant with these IV ANH methods are multiple risks associated with the feeding solutions themselves (e.g., fluid imbalance or electrolyte or other nutrient imbalance) or the IV access (e.g., infiltration, extravasation, infection, or sepsis).<sup>23</sup>

Hypodermoclysis is a method of providing supplemental hydration and, sometimes, medications via a subcutaneous route, and proctoclysis (a.k.a. rectoclysis or rectal hydration) similarly accomplishes the same clinical goals by means of absorption through the rectal mucosa.<sup>24</sup> Hypodermoclysis and proctoclysis are not, at this time, utilized for delivering nutrients other than water and electrolytes, but they are safe and effective means of keeping severely debilitated patients hydrated without resorting to IV ANH, which is expensive and may involve complications.<sup>25</sup>

## Ethical and Moral Principles

### *Assisted Nutrition and Hydration in General*

In recent years, ethical attention has focused on enteral ANH and tube feeding, but due consideration should be given to the ethics of parenteral administration of ANH, particularly in end-of-life care.<sup>26</sup> It is important to carefully consider PNH within the context of Catholic moral teaching in order to gain clarity about its proper use and when it can be licitly withheld or discontinued.

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<sup>20</sup>NCCB, *Nutrition and Hydration*, Appendix; Eduardo Bruera et al., “Effects of Parenteral Hydration in Terminally Ill Cancer Patients: A Preliminary Study,” *Journal of Clinical Oncology* 23.10 (April 1, 2005): 2366–2367; Eduardo Bruera et al., “Proctoclysis for Hydration of Terminally Ill Cancer Patients,” *Journal of Pain and Symptom Management* 15.4 (April 1998): 216–217.

<sup>21</sup> McCamish and Crocker, “Enteral and Parenteral Nutrition,” 112.

<sup>22</sup> Perry and Potter, *Clinical Nursing Skills*, 849.

<sup>23</sup> Ignatavicius and Workman, *Medical Surgical Nursing*, 226 and 1401.

<sup>24</sup> Mion and O’Connell, “Parenteral Hydration and Nutrition in the Geriatric Patient,” 149; and Bruera et al., “Proctoclysis for Hydration,” 216–218.

<sup>25</sup> Mion and O’Connell, “Parenteral Hydration and Nutrition in the Geriatric Patient,” 149; and Bruera et al., “Proctoclysis for Hydration,” 216–218..

<sup>26</sup>NCCB, *Nutrition and Hydration*, Appendix.

Commonly held principles of medical ethics help guide clinical decision making with regard to the proper use of all ANH. Chief among these is beneficence—the basic medical principle that practitioners be proactive in seeking to do good for patients in their care.<sup>27</sup> Nonmaleficence—expressed most concisely in the Latin aphorism, *Primum non nocere* (“First, do no harm”)—is commonly included as a corollary of beneficence and requires that, above all, health care providers avoid any action that knowingly and disproportionately harms the patient.<sup>28</sup> Other important and relevant ethical principles include autonomy, which ensures that the individual patient has the freedom to make decisions for himself with regard to his health and his health care, and justice, which demands that clinicians, organizations, and larger polities render equitable care to all seeking to restore health and maintain well-being.<sup>29</sup>

In situations where these values are in conflict—where, for example, a patient may choose to exercise autonomy by refusing an intervention that a clinician may, by virtue of beneficence and nonmaleficence, deem obligatory<sup>30</sup>—medical ethicists have resorted to distinguishing between care that is ordinary (proportionate), and thus obligatory, and care that is extraordinary (disproportionate), and thus optional.<sup>31</sup> This distinction is crucial in the current discussion because, while providing food and water are, as noted above, universally affirmed as ordinary, obligatory care under normal circumstances, the majority medical opinion is that ANH is a medical treatment, and consequently can be considered optional extraordinary care, and in any case its removal in no way constituting euthanasia.<sup>32</sup> Nevertheless, a vocal minority of clinicians, ethicists, and interested organizations, including especially the Catholic Church, continue to insist that denying any human person food and water adequate to sustain life—even when it has to be administered via tubes—can indeed constitute a form of passive euthanasia, and hence a gravely immoral act of killing, which must be eschewed.<sup>33</sup>

With regard to applying the principle of proportionality, the Church allows that there are circumstances in which physiological realities, that is, that the burdens

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<sup>27</sup> Mion and O’Connell, “Parenteral Hydration and Nutrition,” 146; and *Evidence-Based Nursing Guide to Legal and Professional Issues* (Philadelphia: Lippincott Williams and Wilkins, 2009), 312.

<sup>28</sup> Ignatavicius and Workman, *Medical Surgical Nursing*, 5; and *Evidence-Based Nursing Guide*, 312–313.

<sup>29</sup> Ignatavicius and Workman, *Medical Surgical Nursing*, 5; and *Evidence-Based Nursing Guide*, 311–312.

<sup>30</sup> Ignatavicius and Workman, *Medical Surgical Nursing*, 5; and *Evidence-Based Nursing Guide*, 312.

<sup>31</sup> May, *Catholic Bioethics*, 277.

<sup>32</sup> Judith Johnson and Christine Mitchell, “Responding to Parental Requests to Forgo Pediatric Nutrition and Hydration,” *Journal of Clinical Ethics* 11.2 (Summer 2000): 132.

<sup>33</sup> Congregation for the Doctrine of the Faith, *Responses to Certain Questions of the United States Conference of Catholic Bishops Concerning Artificial Nutrition and Hydration and Commentary* (August 1, 2007), Commentary, 1; and George P. Graham, “Artificial Nutrition and Hydration: It Is Time to Take a Stand,” *Homiletic and Pastoral Review* 99 (May 1999): 17.

involved in continuing ANH or in the imminence of a patient's death, make it morally acceptable to remove or refuse ANH.<sup>34</sup> Even so, such situations, no matter how common, still constitute exceptions to the underlying principle, which insists on providing food and water to all, regardless of condition, as long as the food and water can be assimilated and serve their proper finality of nourishing the body and providing comfort.<sup>35</sup> There can be no justification, in other words, for allowing a sick or debilitated individual who can still assimilate nutrients to die as a result of caregivers deliberately withholding food and water, regardless of how they are administered.<sup>36</sup>

The teaching of the Catholic Church on ANH has gained particular clarity in recent years, especially with regard to a more nuanced understanding of how to determine what constitutes obligatory care. With modern medical advances and technological progress, one of the most important magisterial guides in this area was an address by Pope Pius XII to some anesthesiologists in 1957 in which he made it clear that ordinary and obligatory care should not require overly heavy burdens on a patient or anyone else.<sup>37</sup> Over the next few decades, the application of this to ANH was rife with controversy and conflict as clinicians and ethicists battled over whether ANH represented such a heavy burden or not. By promoting the use of the categories of proportionate and disproportionate, as opposed to ordinary and extraordinary, the Congregation for the Doctrine of the Faith's 1980 *Declaration on Euthanasia* brought more specificity to the debate.<sup>38</sup> However, while making plain the Church's rejection of all intentional killing of innocents, whether by commission or omission, the document did not specifically include a discussion of ANH and its relative role.<sup>39</sup>

A lack of clarity with regard to the ethical status of ANH was summarized well in a resource paper published by the National Conference of Catholic Bishops (NCCB) Committee for Pro-Life Activities in 1992: "But the teaching of the Church has not resolved the question whether medically assisted nutrition and hydration should always be seen as a form of normal care."<sup>40</sup> A decisive moment of clarification came in Pope John Paul II's 1998 address to a group of American bishops on an *ad limina* visit to Rome. While affirming the general principles of the NCCB's resource paper, the Pope stated unequivocally that "the presumption should be in favor of providing medically assisted nutrition and hydration to all patients who need them."<sup>41</sup> The Holy Father went on to elucidate and confirm this principle in a 2004

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<sup>34</sup>United States Conference of Catholic Bishops, *Ethical and Religious Directives for Catholic Health Care Services*, 5th ed. (Washington, DC: USCCB, 2009), nn. 57–58.

<sup>35</sup>John Paul II, Address of the to the participants in the International Congress on "Life-Sustaining Treatments and Vegetative State: Scientific Advances and Ethical Dilemmas" (March 20, 2004), n. 4.

<sup>36</sup>CDF, *Commentary*, 1

<sup>37</sup>May, *Catholic Bioethics*, 277–278.

<sup>38</sup>Congregation for the Doctrine of the Faith, *Declaration on Euthanasia* (May 5, 1980), n. IV.

<sup>39</sup>*Ibid.*, nn. II, IV.

<sup>40</sup>NCCB, *Nutrition and Hydration*, q. 2.

<sup>41</sup>John Paul II, Address of the to the Bishops of the Episcopal Conference of the United States of America (California, Nevada, and Hawaii) (October 2, 1998), n. 4.

address in which he stated flatly that “the administration of water and food, even when provided by artificial means, always represents a *natural means* of preserving life, not a *medical act*.”<sup>42</sup>

This positive affirmation of feeding and hydrating as ordinarily obligatory parts of the care due to all patients has a negative corollary—i.e., the deliberate withholding of food and water, regardless of how it is administered, can constitute a form of passive euthanasia, particularly when the intention is to hasten the patient’s death.<sup>43</sup> The Church has made it abundantly clear that all forms of euthanasia, whether passive or active, are gravely immoral and must be avoided.<sup>44</sup>

*Parenteral Nutrition and Hydration versus  
Enteral Nutrition and Hydration*

Despite the similarities between enteral ANH and PNH, the fact that PNH bypasses the GI tract entirely is significant in terms of Catholic moral principles. All forms of ANH, whether enteral or parenteral, are oriented to the adequate nourishing and hydrating of ill and debilitated persons—a matter that the Church has made clear is of utmost concern.<sup>45</sup> Thus, questions of when and if to withhold or withdraw any form of ANH should be considered very seriously, with due weight given to the recent magisterial teachings that declare that, in principle, nutrition and hydration are always to be included as part of ordinary obligatory care.<sup>46</sup>

Yet, PNH, as described above, is not assimilated via normal digestive processes, and the associated body system is replaced by a substitute technology, whether IV or otherwise. Hence, there are grounds for taking into account matters of proportionality in the case of PNH that might not be relevant in the case of enteral ANH. Enteral ANH, like ordinary provision of food and water, is in principle obligatory as long as it serves to nourish and provide comfort, and may be withdrawn (or withheld) only when the body can no longer assimilate the nutrients or the burdens of administration clearly outweigh the benefits of nourishment or comfort.<sup>47</sup> But PNH, unlike enteral ANH, is not obligatory in the same sense, and perhaps can be ethically compared to the use of ventilators for patients who permanently require mechanical breathing assistance, in that both indefinite PNH and indefinite ventilation have permanently replaced an essential bodily function.<sup>48</sup>

Usually, PNH is a short-term intervention, and the goal is always to restore full GI function so that the patient can be weaned off PNH and return to normal oral intake of fluids and nourishment.<sup>49</sup> In certain situations, PNH may be utilized

<sup>42</sup> John Paul II, “Life-Sustaining Treatments and Vegetative State,” n. 4.

<sup>43</sup> NCCB, *Nutrition and Hydration*, q. 1.

<sup>44</sup> USCCB, *Ethical and Religious Directives*, n. 60.

<sup>45</sup> *Ibid.*, n. 58.

<sup>46</sup> CDF, *Responses to Certain Questions*, 1.

<sup>47</sup> Graham, “Artificial Nutrition and Hydration,” 17.

<sup>48</sup> Edward J. Furton, “Ventilators versus Food and Water: What Is the Difference between Them?” *Ethics & Medics* 36.6 (June 2011): 4.

<sup>49</sup> Perry and Potter, *Clinical Nursing Skills*, 849.

for a longer period of time in order to adequately nourish and hydrate the patient, especially at the end of life.<sup>50</sup> When such patients are hospitalized, IV ANH is readily implemented, since in the acute care setting the introduction of IV catheters and the use of IV ANH therapy is considered relatively routine.<sup>51</sup>

However, given that the expense and burden the hospitalization can represent for the ailing individual and for his family, an extended in-patient stay for someone in a terminal condition that requires IV ANH may become disproportionately burdensome and the logistics and expense of maintaining IV ANH at home might be similarly daunting.<sup>52</sup> Once IV ANH permanently replaces the digestive system, and despite the fact that it might represent the only possible means of providing an individual adequate nutrition and hydration, it would seem that it ceases to be obligatory in the same way that enteral ANH is obligatory under the principle of proportionality. Graham makes this point when he writes that “when the patient cannot digest food introduced into the stomach or intestines, one may legitimately withhold ANH on the ground that it is ineffective.”<sup>53</sup>

In this regard, IV ANH is similar to mechanical ventilation, because both of these replace an essential bodily function—digestion in the case of IV ANH and breathing in the case of ventilation. “One of the ways of determining whether a particular medical procedure or treatment is an ordinary or extraordinary means is to ask whether it replaces a vital bodily function. The replacement of such a function, especially with an external apparatus, is likely to be, in many cases, an excessive burden.”<sup>54</sup> Like mechanical ventilation, IV ANH may, in certain situations, represent ordinary care, especially when it is employed as a temporary means of sustaining a patient through a critical period of healing and recovery. But once it becomes evident that a patient will require indefinite IV ANH for adequate nutrition and hydration, consideration of proportionality becomes paramount.

Like mechanical ventilation, and *unlike* enteral ANH, it would seem that IV ANH may be refused by a patient or his surrogates, even when it can be foreseen that its absence could lead to a hastened death due to dehydration, and especially if it represents an excessive burden for the patient or expense for his family.<sup>55</sup> According to the CDF, “Such a refusal is not the equivalent of suicide; on the contrary, it should be considered as an acceptance of the human condition, or a wish to avoid the application of a medical procedure disproportionate to the results that can be expected, or a desire not to impose excessive expense on the family or the community.”<sup>56</sup>

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<sup>50</sup> *Ibid.*, 741.

<sup>51</sup> *Ibid.*, 741–756.

<sup>52</sup> G. M. Sayers, D. A. Lloyd, and S. M. Gabe, “Parenteral Nutrition: Ethical and Legal Considerations,” *Postgraduate Medical Journal* 82.964 (February 2006): 79.

<sup>53</sup> Graham, “Artificial Nutrition and Hydration,” 17.

<sup>54</sup> Furton, “Ventilators versus Food and Water,” 4.

<sup>55</sup> USCCB, *Ethical and Religious Directives*, n. 32.

<sup>56</sup> CDF, *Declaration on Euthanasia*, n. IV.

## Fluid Replacement via Hypodermoclysis and Proctoclysis

The moral dimensions of the ongoing administration of PNH in certain clinical situations has to take into account other forms of ANH (particularly with regard to hydration support alone) that are less burdensome than IV ANH and do not necessarily replace a patient's body system. When the clinical situation is such that a patient's condition is terminal and he cannot assimilate nutrients via normal digestive function, then IV ANH can legitimately be considered extraordinary. "Once started, the dying process can be inexorable. A patient with terminal cancer will not gain weight, ANH notwithstanding."<sup>57</sup> In such a situation, and regardless of prognosis, the withdrawal of partial parenteral nutrition or total parenteral nutrition will not likely lead to starvation since, as noted, human beings can survive for four to six weeks without food, and the patient in the last stages of dying would presumably have only days remaining to him.

However, in this same clinical situation, there may be proportionate reason to provide continued hydration (and perhaps electrolytes), especially when it can be accomplished without undue burden to the patient, and it can achieve its proper finality of avoiding death by dehydration.<sup>58</sup> Human beings can survive four to six weeks without food, but only seven days without water.<sup>59</sup> By discontinuing IV nutrition (i.e., partial parenteral nutrition or total parenteral nutrition) but continuing alternative provision of hydration for a patient who is expected to live beyond seven days, the physician can avoid disproportionate and burdensome medical treatment and still provide the ordinary care that is due every patient. "When inevitable death is imminent in spite of the means used, it is permitted in conscience to take the decision to refuse forms of treatment that would only secure a precarious and burdensome prolongation of life, *so long as the normal care due to the sick person in similar cases is not interrupted.*"<sup>60</sup> This principle of avoiding death by dehydration stands firm despite studies that not only deny the significance of the condition's negative dimensions but also promote it as a benign and even desired stage of the dying process.<sup>61</sup>

Hypodermoclysis involves a catheter being inserted into the subcutaneous layer of the skin through which fluids are administered and naturally absorbed into the intravascular compartment.<sup>62</sup> Hypodermoclysis fluid replacement was widely utilized for pediatric rehydration in the 1940s, but the technique fell out of favor in the 1950s in part due to poor outcomes resulting from poor technique but also because of the increased utilization of the more efficient IV fluid replacement therapy as it decreased in cost.<sup>63</sup> There is an increased interest today in hypodermoclysis fluid

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<sup>57</sup> Guinan, "Is Assisted Nutrition and Hydration Always Mandated?" 487.

<sup>58</sup> CDF, *Responses to Certain Questions*, q. 1.

<sup>59</sup> Howland, "A Defense of Assisted Nutrition and Hydration," 698.

<sup>60</sup> CDF, *Declaration on Euthanasia*, n. IV, emphasis added.

<sup>61</sup> See Catherine F. Musgrave, "Terminal Dehydration: To Give or Not To Give Intravenous Fluids?" *Cancer Nursing* 13.1 (February 1990): 63–64.

<sup>62</sup> Edward H. Lybarger, "Hypodermoclysis in the Home and Long-term Care Settings," *Journal of Infusion Nursing* 32.1 (January–February 2009): 40.

<sup>63</sup> *Ibid.*, 40–41.

replacement in North America and Asia, especially in geriatric and hospice care.<sup>64</sup> Hypodermoclysis is still technically and physiologically a parenteral intervention, so the same ethical criteria apply to it as to the more common IV ANH, although due consideration should be given to HDC's relative cost savings and ease of implementation when weighing matters of proportionality.<sup>65</sup>

Proctoclysis is the administration of fluids via a tube that is inserted into the rectum, where the fluids are then absorbed naturally through the rectal mucosa.<sup>66</sup> It should be noted that while proctoclysis, along with other forms of rectal medication administration, would be generally categorized as "nonparenteral,"<sup>67</sup> it could technically be considered an alternative form of enteral administration since the rectum is part of the alimentary canal. This is important in the current discussion since the rectal mucosa naturally absorbs water and some electrolytes—an absorption primarily directed toward the formation of feces, but a legitimate absorption nonetheless.<sup>68</sup> Thus, unlike true parenteral forms of assisted hydration (i.e., hypodermoclysis, IV fluid replacement, partial parenteral nutrition, and total parenteral nutrition), proctoclysis works *with* an essential and associated body system (i.e., the digestive tract) instead of replacing one, making it a candidate for consideration as ordinary care.

With regard to burden and proportionality, both hypodermoclysis and proctoclysis compare very favorably to IV hydration. Proctoclysis and hypodermoclysis are considerably less expensive than IV fluid replacement; less expertise is required to initiate, maintain, and discontinue therapy; and there is less risk involved.<sup>69</sup> This is especially true for proctoclysis since the insertion of the rectal tube does not require sterile technique or supplies.<sup>70</sup> Consequently, hypodermoclysis and, especially, proctoclysis could be considered part of ordinary care for those who may experience life-threatening dehydration and who do not have a functioning digestive tract capable of assimilating nutrients administered through an enteral tube.

### Case Study

In their review of the ethics of PNH, Sayers, Lloyd, and Gabe describe a clinical vignette that provides an appropriate case study that is relevant to the foregoing discussion:

A mentally competent 61 year old patient underwent massive small bowel resection after mesenteric infarction. . . . Parenteral feeding was started and . . . she completed home training and was discharged. She was admitted

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<sup>64</sup> Ibid., 41; and Ignatavicius and Workman, *Medical Surgical Nursing*, 237.

<sup>65</sup> Ruth Remington and Todd Hultman, "Hypodermoclysis to Treat Dehydration: A Review of the Evidence," *Journal of the American Geriatrics Society* 55.12 (December 2007): 2051, 2055.

<sup>66</sup> Bruera et al., "Proctoclysis for Hydration," 216–217.

<sup>67</sup> Perry and Potter, *Clinical Nursing Skills and Techniques*, 568.

<sup>68</sup> Ignatavicius and Workman, *Medical Surgical Nursing*, 1219.

<sup>69</sup> Bruera et al., "Effects of Parenteral Hydration," 2367; and Bruera et al., "Proctoclysis for Hydration," 217.

<sup>70</sup> Bruera et al., "Proctoclysis for Hydration," 217.

the following year with superior vena cava thrombosis, and her treatment was complicated by repeated gastrointestinal bleeds. At this point she stated that she had undergone enough and requested that all treatment, including parenteral nutrition, should be stopped. She was fully aware that this would result in her death.<sup>71</sup>

Even given the limited clinical details provided in this vignette, a tentative ethical response based on Catholic moral principles can still be made, beginning with respect for patient autonomy. If traditional parenteral ANH is indeed an extraordinary intervention, as suggested above, especially when it becomes a permanent means of nourishment, then the Catholic clinician can have no qualms of conscience in acquiescing to the patient's request to discontinue his total parenteral nutrition. Given the foregoing discussion of alternative means of hydration, however, it would seem advantageous and perhaps even obligatory to offer this patient fluid replacement via hypodermoclysis or proctoclysis at home as a means of avoiding an unnecessary terminal dehydration with its associated discomfort and even hastened death.<sup>72</sup>

It is true that hypodermoclysis and proctoclysis fluid replacement, by virtue of being relatively rare techniques in current clinical practice, might be considered esoteric and, consequently, irrelevant to mainstream clinical discussions of proportionality and end-of-life care. Nonetheless, they are relatively inexpensive, uncomplicated, and low-risk means of maintaining adequate hydration for those unable to assimilate fluids by oral or normal enteral ANH routes, and hypodermoclysis and proctoclysis deserve greater attention, particularly in Catholic end-of-life deliberations.

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<sup>71</sup> Sayers, Lloyd, and Gabe, "Parenteral Nutrition," 80.

<sup>72</sup> Bruera et al., "Proctoclysis for Hydration," 216.