DEBATE

Ethics of postmortem sperm retrieval

Ethics of sperm retrieval after death or persistent vegetative state

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Postmortem sperm retrieval was first reported in 1980 by Rothman, in a case involving a 30-year old man who became brain dead following a motor vehicle accident and whose family requested sperm preservation (Rothman, 1980). Ohl et al. reported family requests for sperm retrieval in one case involving a patient in the persistent vegetative state (PVS), one case in which the patient was ‘in an extended coma with a poor prognosis for recovery,’ and four cases involving brain dead patients (Ohl et al., 1996). Several other case reports involving postmortem sperm retrieval have been published (Nolan et al., 1990; Pozda, 1996; Townsend et al., 1996; Iserson, 1998). Various methods for retrieving spermatozoa have been described, including surgical excision of the epididymis (Rothman, 1980), irrigation or aspiration of the vas deferens (Kerr et al., 1997), and rectal probe electroejaculation (Townsend et al., 1996). A survey of fertility centres in the USA (Kerr et al., 1997) found that a total of 40 centres reported 82 requests for postmortem sperm retrieval between 1980 and July 1995. Pregnancy following postmortem sperm retrieval was reported for the first time in 1998 (Allen, 1998a), and a subsequent birth was reported in March 1999 (Lota, 1999). Media coverage is raising public awareness of such sperm retrieval, and more frequent family requests for it following death or PVS seem likely in the future.

In these cases, death or PVS commonly is caused by trauma, anoxic injuries, or rapidly-progressing infections. Because these illnesses are unanticipated, the patient typically has not given prior written or verbal consent to sperm retrieval. In these situations, physicians who are asked to perform sperm retrieval, sperm storage, and artificial insemination face difficult ethical issues: Is postmortem reproduction ethically justifiable? Is it ethical to retrieve spermatozoa from patients who are dead or in PVS but have not given explicit prior consent? If retrieved spermatozoa are frozen, what should be the terms of the sperm storage agreement? Should there be limits on the length of storage? Should there be restrictions on who can be inseminated? There has been little discussion of these particular questions, although some aspects of posthumous reproduction have been addressed (Robertson, 1994a; Ahuja et al., 1997; American Society for Reproductive Medicine, 1997; Brahams, 1997).

The difficulty of these issues is illustrated by the following case, in which two of the authors were asked to perform retrieval, storage, and possible future artificial insemination. A 31 year old man on a business trip had a sudden loss of consciousness, and emergency medical personnel determined that he had suffered a cardiac arrest and was in ventricular fibrillation. After four attempts at defibrillation, a rhythm of atrial fibrillation with a rapid ventricular response was established and the patient was intubated and transported to the emergency department. He was admitted to the hospital and placed on a respirator. His medical history was notable for a bicuspid aortic valve, mild mitral valve regurgitation, and a 2 year history of atrial fibrillation managed with digoxin. On physical examination, the patient was comatose and unresponsive to verbal or tactile stimuli. A doll’s-eye reflex was elicited, and pupils were midline and reactive to light. A computerized tomography (CT) scan revealed cerebral oedema and extensive bilateral cerebral infarction. An electroencephalogram (EEG) showed moderate to diffuse slowing consistent with moderate to severe anoxic encephalopathy. When it became apparent that it was highly unlikely he would recover from the hypoxic injury, the physicians and family agreed that he would be extubated and allowed to die if his brain stem function was inadequate to maintain respiration.

Family members who arrived from out of town included the patient’s wife, mother, sister, and brother, and the wife’s mother. The patient and his wife had been married for two months. Prior to proceeding with extubation, the wife inquired about the possibility of sperm extraction for insemination at a later date. All the family members agreed that the patient would have intended to have children in the course of the marriage, but there was no indication as to how many, when, or under what circumstances.

The physicians requested a consultation from the hospital ethics committee and subsequently met with the committee’s consultation team. Although the physicians requested advice about the ethics of carrying out sperm retrieval in this case, most of the discussion by the ethics committee focused on liability and other legal issues. No advice was given concerning the question of whether it would be ethical to retrieve spermatozoa in the absence of patient consent. The committee’s conclusion was that legally there was no significant objection to performing the procedure if that was what the wife wanted, and that sperm retrieval apparently would not conflict with the religious beliefs of any of the parties involved.
The apparent inability of the ethics committee to give advice concerning the ethical issues probably reflects, in part, the complexity and novelty of the case and the difficulty of the issues it raises. This underscores the need for discussion and debate of these issues.

Ethical considerations in posthumous reproduction

Variety of scenarios

Postmortem sperm retrieval and insemination is one of several types of situations in which posthumous reproduction can be attempted. Men diagnosed with cancer sometimes store their spermatozoa prior to chemotherapy or radiation treatment (Ahuja et al., 1997). In a widely discussed case in France, the widow of cancer patient Alain Parpalaix obtained a court's approval to be inseminated with his spermatozoa after his death, arguing that he had wanted his stored spermatozoa to be used in this way (Aziza-Shuster, 1994; Benshushan and Schenker, 1998). Similarly, men might wish to store spermatozoa before going into battle or pursuing other high-risk activities. In an unusual case in the USA, William Kane bequeathed his frozen spermatozoa to his girlfriend and instructed the sperm bank to allow her to use it for insemination after his death. Kane then committed suicide, and the girlfriend Debra Hecht subsequently won a court ruling allowing her to be inseminated (Hecht v Superior Court, 1993).

In addition to spermatozoa, pre-embryos and ova could be used posthumously. In a famous 1983 case, Mario and Elsa Rios died in an airplane crash, leaving behind two frozen pre-embryos in an IVF clinic in Melbourne, Australia. There was a great deal of debate over whether the pre-embryos should be made available to another infertile couple (Smith, 1985–86). Alternatively, a man might desire to have pre-embryos transferred to a surrogate mother after his wife has died. If freezing of oocytes becomes an accepted practice, the issue of posthumous use will apply to them as well. Each of these scenarios raises the issue of whether the posthumous reproduction in question is ethically acceptable. On balance, would the posthumous reproduction promote—or would it interfere with—important human aims?

Different governments have responded to posthumous reproduction in different ways. Germany, Sweden, Canada, and the state of Victoria, Australia have legislation that prohibits posthumous assisted reproduction (Bahadur, 1996; Webb, 1996). Western Australia has regulations that forbid posthumous use of gametes (Webb, 1996). With regard to pre-embryos, Israel allows their transfer to the wife within 1 year of a husband’s death, even in the absence of his consent. However, if the wife dies, the pre-embryos cannot be used (Benshushan and Schenker, 1998). In regard to spermatozoa, in the UK, the 1990 Human Fertilisation and Embryology Act does not prohibit posthumous storage and use of spermatozoa, but it requires the man’s prior written consent for sperm storage. Thus, postmortem retrieval, storage, and insemination would be permitted with valid written consent. In France after the Parpalaix case, the Centre d’Etude et de Conservation du Sperme Humain (CECOS) adopted an explicit policy of not permitting postmortem insemination, and this policy was upheld by the French courts (Aziza-Shuster, 1994). In 1994, France passed a law forbidding posthumous insemination (Lansac, 1996). Belgium and the USA currently permit postmortem insemination without the man’s prior written consent (Brahms, 1996, 1997).

Significance to individuals of posthumous reproduction

Given these diverse policies, which include the prohibition of all posthumous reproduction in some countries, an important question is whether there are ethical reasons that support permitting posthumous reproduction when there is valid prior consent. One approach to answering this question is to consider why procreation is valued by individuals in more ordinary contexts. By ‘ordinary’ we mean the more common form of procreation in which a couple conceives by sexual intercourse and then raises the child who is born. Our strategy is to ask why procreation is meaningful to persons in the ordinary scenario, and then consider whether any of those reasons can apply in the context of posthumous reproduction. If some of them apply, they would lend support to a policy of permitting posthumous reproduction with valid prior consent, at least in some cases.

Taking this approach reveals that several reasons individuals might have for valuing procreation in the ordinary scenario can be applicable to posthumous reproduction, and for brevity we shall focus on those reasons. We do not imply that all persons would want postmortem reproduction for these reasons, only that some might.

One reason some might value procreation in the ordinary context is that it involves participation in the creation of a person. Such participation can be important to individuals for various reasons. Some might attach meaning to the idea of creating an individual who develops self-consciousness. For others, participation in the creation of a person might have religious significance; some might see it as acting as an instrument of God’s will, while others might regard it as fulfillment of a religious duty. Moreover, it is reasonable to say that one can participate in the creation of a person even though the conception and/or gestation occurs after one’s death. After all, individuals can take actions when alive that will cause the conception or gestation to occur after death, and it is their own gametes that would be used. Admittedly, the individual would not know whether the attempt to create a person posthumously would be successful. Nevertheless, the plan to accomplish it and the hope that the plan succeeds could be meaningful to some.

Another reason some people value procreation in the ordinary scenario is that it can be an affirmation of mutual love and acceptance. It can be an expression of strong acceptance to say to another, in effect, ‘I want your genes to contribute to the genetic makeup of my children.’ A relationship can be deepened and enriched by this sort of affirmation. Moreover, such affirmation can exist when the procreation is planned to occur after the death of one member of the couple. For example, in the Parpalaix case it was reported that the plan to attempt postmortem reproduction had this sort of special meaning for the couple (Hecht v Superior Court, 1993, p. 857).
Furthermore, when one member of the couple survives, that person can have reasons for valuing the procreation in question. In addition to the two reasons discussed above, other reasons individuals might have for valuing procreation in the ordinary context could be relevant. One is that procreation leads to experiences associated with child rearing, and a surviving spouse might attach importance to this. For women, procreation sometimes is valued in part because it involves experiences of pregnancy and childbirth, and a surviving wife might consider such experiences to be significant. Thus, there are various reasons that sometimes are relevant in explaining why a plan to reproduce posthumously can be meaningful to a person before death and to the surviving partner.

**Interests of the child**

An assessment of the ethics of posthumous reproduction requires attention to the specifics of the particular case and consideration of reasons for and against such procreation. One of the main objections to posthumous reproduction focuses on cases in which the child would be raised by one surviving parent. The concern is that bringing the child into a single parent household would be harmful to the child. However, a serious problem with this objection has been pointed out (Strong and Schinfeld, 1984; Robertson, 1994b; Strong, 1997). Specifically, the objection overlooks the fact that the acts that supposedly harm the child are the very acts that bring the child into being. Because the objection overlooks this, it misuses the concept of ‘harm.’ To see this, we need to consider what it means to be harmed. A key point is that persons are harmed only if they are caused to be worse off than they otherwise would have been (Feinberg, 1984). The claim that postmortem insemination harms the children who are brought into being, therefore, amounts to saying that the children are worse off than they would have been if they had not been created. Many readers will see problems with such a statement. Some will say that it fails to make sense because it tries to compare nonexistence with something that exists. Others will claim that it makes sense but is false. The latter claim is based on the view that sometimes it can make sense to say that a child is worse off than she would have been if she had not been created; namely, when the life is so filled with pain and suffering that these negative experiences greatly overshadow any pleasurable or other positive experiences the child might have. For example, if an infant were born with a debilitating, painful, and fatal genetic disease it might be reasonable to make such a statement. It goes on to point out that the gap between such an infant and a child raised in a single parent household is exceedingly great. Even if a child experienced some disadvantages in having only one living parent, that would not amount to a life filled with pain and suffering. Thus, it can be argued that it is false that such children are harmed by being brought into being. Whether incoherent or false, the claim that the children in question are harmed by being brought into being should be rejected.

It might be objected that applying the usual concept of harm, as we have done, leads to implausible conclusions (Strong, 1997; Pennings, 1999). It seems to imply that it is acceptable knowingly to create a child who will suffer disadvantages—even serious ones—as long as those disadvantages are not so severe that the child’s life would be worse than nonexistence. To illustrate, consider a hypothetical situation in which a woman requesting donor insemination (DI) is an unreformed alcoholic. Suppose that a physician knows about the alcoholism but performs DI, with the result that a child is born with fetal alcohol syndrome. It seems wrong for the physician to carry out DI in this situation. According to the usual concept of harm, however, the child is not harmed by the act of performing DI, given that the child’s life is better than nonexistence. If it is mistaken to say that the child is harmed, then how can we account for our view that carrying out the DI is unethical?

In reply, it is possible to account for DI being unethical in such a case without inventing a new concept of harm. Although the child is not harmed by the DI, we can say that she is wronged. One approach to arguing that the child is wronged is to claim that a certain right of the child is violated. Several authors have suggested that there might be a type of birthright, according to which people have a right to be born free of serious impediments to their well-being (Bayles, 1976; Feinberg, 1984; Steinbock and McClamrock, 1994; Strong, 1997). It is important to be clear about the nature of this supposed right. It is not a ‘right to be born’ but rather a right possessed by all persons who are born. Also, it is not what one might call a ‘right against nature’; if a child is born with serious handicaps through no one’s fault, then the right in question is not violated. The right would only be violated if someone intentionally or negligently caused a child to be born with severe impediments to her well-being. One could account for the wrongness of DI in the alcoholism example by positing such a birthright, a right that one’s circumstances of birth be free of impediments that would seriously impair one’s ability to develop in a healthy manner and to realize a normal potential. This right has been referred to as a right to a decent minimum opportunity for development (Strong, 1997). The handicaps imposed on the child with fetal alcohol syndrome are not so severe that we could reasonably say that her life is worse than nonexistence, but they are severe enough to impair seriously her ability to develop. Thus, one can explain why DI is wrong in this case by arguing that the child’s right to a decent minimum opportunity for development has been violated.

Assuming there is a right to a decent minimum opportunity for development, the question arises concerning how serious the impediments must be in order for the right to be violated. No doubt, there is room for disagreement on this, and a sharp line probably cannot be drawn. Nevertheless, the basic idea underlying this right can be stated: the impediments must be severe, not minor (Strong, 1997). No one could reasonably claim that a minor disadvantage is a basis for saying that a child’s right has been violated. To give an obvious example, being born into a family with a slightly below-average income would not violate the right in question. By contrast, being born with fetal alcohol syndrome following DI, when the physician providing DI knows about the unreformed alcoholism, would constitute violation of the right. Given this way of understanding the right, it would be difficult to argue that it is violated simply by creating a child who will be raised in a
single parent household. One would have to claim that the impediments involved in being raised in a single parent household are severe, not minor. The impediments that are claimed to exist in this type of situation include such things as absence of a male role model, reduced time for parent–child interaction, and below-average income. At present, we lack empirical studies that would tell us, in regard to single parent households, the extent to which these factors are present, whether they have an adverse impact on the child’s development, and, if there is an impact, its severity (Golombok, 1998). Thus, there is a lack of evidence that impediments exist that are comparable in severity to, say, fetal alcohol syndrome and its associated mental retardation. In the absence of such evidence, the claim that the right is violated by creating a child who will be raised in a single parent household is not persuasive.

Another objection might simply claim that the children raised in a single parent home would experience disadvantages compared to children reared in two-parent households. This objection amounts to saying that the child-rearing arrangement would not meet some particular ideal (Strong, 1997, p. 95; Pennings, 1999). In reply, even the claim that these children would experience disadvantages is a matter of dispute (Golombok, 1998). Moreover, if we assume for sake of argument that the children would experience disadvantages, it does not follow that it is wrong for physicians to provide assistance in bringing about the existence of the children. After all, it is not generally considered wrong for parents to have children when it is likely the children will experience disadvantages. If we accepted the objection in question, we would have to say that it is wrong, for example, for all couples with below-average incomes to have children, and surely this would be an incorrect conclusion. Similarly, the mere fact that there would be disadvantages does not constitute a serious enough consideration to justify a claim that it is wrong for a physician to participate in assisted reproduction. The reason it is not a serious enough consideration is that the disadvantages have to be weighed against the positive features of bringing the child into being. The fact is, the reproduction in question gives the child a life and enables her to experience the goodness of living. Her life itself is something that has value, and this must be taken into account, along with the disadvantages (Strong, 1997).

Consent: explicit or inferred

A main issue raised by requests for sperm retrieval after death, PVS, or coma as in the case report presented above, is whether it is ethically justifiable to carry out such requests in the absence of the man’s prior explicit consent. By explicit consent we mean a patient’s written consent or verbal consent that is documented by a health care provider. There has been some discussion of this issue in response to the case of Diane and Stephen Blood. In 1996, Mr Blood was diagnosed with meningitis and died within 4 days. When he was comatose prior to death, physicians removed two samples of spermatozoa at Mrs Blood’s request. In a conversation with his wife before the illness, Mr Blood reportedly had approved of the idea of posthumous use of his spermatozoa to inseminate her (Blyth and Cameron, 1998; Blood, 1998). After the sperm removal, the Human Fertilisation and Embryology Authority refused Mrs Blood permission to be inseminated because the spermatozoa had been stored unlawfully, based on the Human Fertilisation and Embryology Act’s requirement of the man’s explicit prior consent for sperm storage. In discussing this case, some commentators have asserted that explicit prior consent is ethically required for postmortem sperm retrieval, storage, and use. For example, this position has been stated by J. Stuart Horner, chair of the British Medical Association’s ethics committee (Horner, 1996). And in January 1999, State Senator Roy Goodman introduced a bill in the New York legislature forbidding posthumous sperm retrieval unless the man has previously consented in writing (Andrews, 1999).

However, in other areas of medicine where decisions must be made in the absence of explicit prior consent, making decisions based on the inferred consent of the patient is recognized as a way to respect patient autonomy. For example, this is acceptable practice in making decisions about whether to provide life-prolonging treatment for patients in PVS who have no advance directives. Typically, family members are asked whether patients had ever expressed their wishes about life sustaining treatment in such circumstances. If it can be inferred from the patient’s previous statements and values that the patient would want treatment withheld, then such inferred consent could be an important part of an ethical justification for withholding it.

Similarly, when patients are brain dead and organ donation is being considered in the absence of a signed donor card, it is possible to respect the autonomy of the previously alive person when it can be ascertained what that person would have wanted. Family members might be asked whether the patient had ever expressed a wish concerning organ donation. If it can reasonably be inferred that the patient would approve removal of organs, such inferred consent would be an important part of an ethical justification for their removal, assuming the organs are medically suitable for transplantation. On the other hand, if it can reasonably be inferred that the patient would disapprove organ removal, then it should not take place. If the patient’s wishes cannot be inferred, then the next of kin may ethically consent to organ removal, where the justification for removal is based on benefits for transplant recipients and the lack of evidence that the patient would have refused.

Inferred consent also seems relevant when sperm retrieval following death or PVS is requested. Acting in a respectful manner toward the previously competent or previously alive patient, in the absence of an explicit written consent by the patient, requires us to ask whether the patient’s wishes can reasonably be inferred, based on his previous statements and goals. These considerations suggest that explicit prior consent is not necessary for the ethical justifiability of sperm retrieval following death or PVS, provided it is reasonable to infer that the man would consent if he were able to do so.

Some have objected to the idea that the explicit prior or reasonably inferred consent of a deceased patient is ethically relevant, claiming that the dead no longer have interests (Robertson, 1998). In reply, there is an important reason why we should attempt to act in accordance with the wishes of
previously alive patients, whether explicitly documented or reasonably inferred. Specifically, it is considered disrespectful toward the dead to do things to their bodies to which they would have objected when alive. For example, removing organs from a brain dead patient who would have objected is disrespectful toward the previously alive person. Thus, we inquire about the patient’s wishes in part because we want to avoid such disrespect.

The above considerations raise the possibility that sperm retrieval following death or PVS in the absence of explicit prior consent can be ethically justifiable in at least some cases, based on several factors. The main consideration is that it must be reasonable to infer that the man would agree to sperm retrieval. If it is reasonable to make this inference, then two additional factors could support a decision to perform retrieval. First, if the surviving wife is requesting sperm retrieval and insemination, then carrying out the request can be respectful of her procreative freedom. Second, it has been argued that carrying out such requests for sperm retrieval can provide emotional support to families who are grieving the death or injury of a loved one (Allen, 1998b). These considerations support the view that it may be ethically permissible for the physician to carry out the request in some cases.

**Inferring the wishes of the patient**

The idea that inferred consent can help justify sperm retrieval after death or PVS raises the following question: If there is absence of explicit prior consent, then under what circumstances would it be reasonable to infer that the man would approve of the sperm retrieval? Let us consider a scenario in which there is no explicit prior consent, but family members state that the man would have wanted the retrieval and there is no disagreement about this among the family. A problem that arises is that those providing the evidence concerning the man’s wishes have a conflict of interest. A surviving wife’s claim that her husband would have wanted his spermatozoa retrieved might be biased by her own interest in becoming pregnant. Parents of the man, parents of a surviving wife, or other family members might also be biased by their own interests or the interests of other family members. Therefore, it can be argued, such claims do not constitute a reliable basis for inferred consent.

One might seek a solution to this problem of bias by asking whether there are independent reasons for thinking that the patient would agree to retrieval. Is it plausible to claim, for example, that a married man with no children would agree to his wife’s being inseminated with his spermatozoa? One could point to the apparent strong desire of most married people to procreate. In particular, it could be claimed that most married men want to beget children with their wives. Many people want to have children who will carry on the family line after they die. Moreover, a man might agree to the retrieval if he knew (somehow) that it is what his wife wanted. This conclusion is supported if we make the assumption, which at least sometimes seems reasonable, that a married man would desire to promote the interests of his surviving wife. However, other considerations support the opposite conclusion. Some men might disapprove of the idea of begetting children in circumstances where they would be unable to participate in rearing. They might not want the family line to be carried on if they cannot influence the child’s development. Because of these conflicting possibilities, it is difficult to argue that there are independent grounds for thinking that the patient would consent. If the patient had never discussed these matters with friends or family, then attempts to ‘construct’ his wishes would be speculative.

However, there is a type of situation in which it might be reasonable to infer that the patient would consent, despite the family’s conflict of interest. If the patient had discussed postmortem sperm retrieval with his family and had stated that he would approve of it, then such statements could overcome the problem of family bias. Here the evidence would include, not simply the family’s attempt to guess what the patient would want, but accounts of what he actually had said about retrieval. Although previous cases have not involved patients who have made such statements, future cases might involve such patients, given that the topic is being discussed more widely. Thus, when available family and friends are in agreement that the patient would approve, and their view is based on conversations with the patient about postmortem sperm retrieval, we believe that it can sometimes be reasonable to infer his consent.

In contrast, there can be cases in which family members give conflicting accounts of the patient’s previous statements and disagree over whether he would approve retrieval. In this type of situation, one might conclude that there is not sufficient evidence to infer the patient’s consent.

**Must physicians carry out such requests?**

When family members agree that the man would want sperm retrieval, based on previous conversations with him about this matter, does the physician have a duty to carry out their request? Based on considerations of physician autonomy, a physician is free to choose not to enter into a doctor-patient relationship, except for situations in which the patient has no other access to medically necessary care that the physician in question is competent to provide. Sperm retrieval following death or PVS is not a medically necessary procedure. Thus, although the sperm retrieval is ethically justifiable in some cases, a physician who is asked to retrieve spermatozoa has no duty to agree to do it. Moreover, the principle of conscientious objection would be applicable; a physician who conscientiously opposes such sperm retrieval is free to decline to perform it.

**Terms of the sperm storage and insemination agreement**

In jurisdictions where sperm retrieval after death or PVS is legally permitted, another set of issues involves the terms of the sperm storage and insemination agreement. These issues arise regardless of whether explicit prior consent to sperm retrieval and storage is a legal requirement or reasonably inferred consent is legally acceptable. One issue is whether there should be restrictions on who can be inseminated with the spermatozoa. Suppose in a given case there is evidence
that the man would approve of his wife being inseminated and no evidence that he would approve of anyone else being inseminated. Conceivably, the question might later arise as to whether his spermatozoa should be made available to inseminate someone else, perhaps as an anonymous donation. In the absence of evidence he would approve such use, it seems reasonable to conclude that such use would not be ethically justifiable. These considerations suggest that it would be appropriate in some cases for the storage agreement to stipulate that the spermatozoa is to be used to inseminate only a specified individual.

It might be asked whether there should be limits on the length of time for storage of spermatozoa retrieved after death. The person legally authorized to make decisions about storage would typically be the next of kin. If the authorized person is willing to pay the costs involved, we see no compelling reason to place limits on the length of storage. However, the storage agreement should specify the disposition of the spermatozoa in the event of the incapacity of the authorized decision maker. For example, a wife who wants to be inseminated might die or become permanently incompetent before insemination can take place, and disposition of the spermatozoa in these types of scenarios should be addressed in the storage agreement.

It is possible that the next of kin is not the woman who would be inseminated, as in cases involving a fiancée or girlfriend. It is conceivable, therefore, that a decision by the next of kin to terminate storage, or an inadvertent failure of the next of kin to extend the period of a renewable storage agreement, might interfere with the procreative interests of the woman who would be inseminated. One way the physician could acknowledge her interests would be to give her notice before terminating storage in such circumstances, and the storage agreement might reasonably stipulate that such notice is to be given. Alternatively, the agreement might state that at the outset the woman who is to be inseminated is to have sole decision making authority concerning storage and use of the spermatozoa. The next of kin would have to be one of the signatories of such an agreement.

Another possibility would be the death or incompetence of a next of kin who has decision making authority during the reproductive life of the woman who would be inseminated. To deal with this possibility, the storage agreement might stipulate that decision making authority would transfer to the woman in the event of the death or incompetence of the next of kin.

These considerations suggest that there are a number of contingencies that should be addressed in the storage agreement. A practical problem in obtaining and documenting this agreement arises because freezing within 24 h after cardiac standstill is optimal for sperm viability. Because of the limited time available in some cases, it might be helpful to develop a document ahead of time that covers the various contingencies.

**Persistent vegetative state versus death**

There are several important ways in which sperm retrieval cases involving PVS and those involving death are ethically similar. First, the idea that reasonably inferred consent provides a way to respect patient autonomy appears to be equally applicable to cases involving PVS and those involving death. Second, the reasons that persons can have for valuing postmortem reproduction can also apply to reproduction after PVS. Third, a plan for sperm retrieval and insemination can provide emotional support to grieving families when the patient is in PVS, as it can when the patient is dead. On the other hand, there are some ways in which cases involving PVS and those involving death differ, legally and ethically.

Legal paternity is one of the ways these two types of cases can differ. Paternity laws vary in different jurisdictions, but in some jurisdictions legal paternity would be decided differently, depending on whether conception occurs before or after the death of the patient. In the United States, for example, if conception occurs while the patient is in PVS, and thus alive, the offspring would be the legal child of the patient. If conception occurs after the man’s death, the question of paternity would not be so straightforward. Some states in the USA have adopted the Uniform Parentage Act, according to which the deceased man would be presumed to be the father of the child provided the couple had been married and the birth occurred within 300 days of the man’s death (Gibbons, 1997). If birth occurs after 300 days in those states, or if birth occurs in states without statutes addressing posthumous conception, then current law provides no basis for presuming that the deceased is the legal father (Gibbons, 1997).

Another legal issue involves inheritance. A child conceived while the patient is in PVS would legally be considered an heir. On the other hand, in many jurisdictions current laws on inheritance do not take into account the possibility of postmortem conception. In the USA, for example, a child conceived after the father’s death could not inherit under present law unless the decedent explicitly provided for such inheritance in a will (Gilbert, 1993). However, a posthumously conceived child not provided for in a will could bring a claim in court against the father’s estate. How such claims should be resolved is a matter of debate.

Conceivably, a dispute over inheritance could affect decisions about life support. For example, a family member’s request to stop life support for a patient in PVS could conceivably be motivated by a desire to prevent a future child from inheriting. Alternatively, a family member’s request to continue life support might be based on a desire to establish paternity and inheritance rights. Whether it could ever be ethically justifiable to base life support decisions for patients in PVS on these types of considerations is an issue that would need to be explored.

Another concern would arise if, as sometimes happens, a patient in persistent vegetative state is kept alive for years. One might ask what would be the impact on the child in this situation. How would it affect a child to see periodically a permanently vegetative father and never to have known the father in any other state? Even if this would be psychologically difficult for the child, such considerations alone would not make it unethical to perform the retrieval, unless the psychological damage would be so great as to constitute a severe impediment to development.
Conclusions

It can be argued that a man’s explicit prior or reasonably inferred consent is necessary for the ethical justification of sperm retrieval following death or PVS. This implies that written consent or verbal consent documented by a health care provider is not an absolute requirement, although such documentation would be desirable. Attempts to infer what the patient would want are difficult when family members reporting the patient’s wishes have a conflict of interest. It is possible that in some cases a reasonable inference can be made if the patient has previously discussed these matters with family members.

Applying these considerations to the case presented at the beginning of this paper suggests that sperm retrieval would not be ethically justifiable in that case. The patient had never expressed views to his family concerning sperm retrieval following death or permanent incompetence. Thus, the family was unable to provide evidence concerning the patient’s wishes. The physicians should decline to carry out the request, explaining that they would consider performing such procedures only if there was substantial evidence that the patient would have approved. The issues raised by these types of cases are complex and deserve further debate.

References


Hecht v Superior Court, 16 Cal.App.4th 836, 20 Cal.Rptr.2d 275 (June 1993).


