

The Biotech Child of the 21st Century: Determining Parenthood in the World of Assisted Reproductive Technologies

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Developments in Assisted Reproductive Technologies (ART) have moved rapidly, offering new ways of making families with many different scenarios. The options created by these growing technologies have advanced much faster than the law, especially with regard to issues of estate planning.

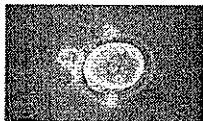
This presentation will focus on Posthumous Sperm Procurement (SHSP) and its ramifications on reproduction and the resulting children, an option only possible since the birth of Louise Brown in 1978. While posthumous reproduction has occurred throughout history, PHSP with subsequent conception and birth of a child is possible only because of the advances in ART.

Exploration of how these techniques are acquired as part of the vocabulary of available ART procedures will be presented as an illustration of why Reproductive Endocrinologists develop some of the options which current technology permits. Their effect on estate planning issues is left to the rest of the panel.

Listed below are references from the pertinent national professional organizations involved in helping to set guidelines for ART practitioners in some of these areas.

1. American Society for Reproductive Medicine :www.ASRM.org
Practice guidelines
Ethics Committee Reports
2. American College of Obstetrics and Gynecology: www.ACOG.org
3. European Society of Human Reproduction and Embryology: www.ESHRE.org
4. ESHRE: Task Force on Ethics and Law (ESHRE Monographs: 2007
eshrmonographs.oxfordjournals.org)
5. Batzer, Hurwitz, Caplan .Postmortum parenthood and the need for a protocol with posthumous sperm procurement.*FertilSteril*2003;79:1263-9
6. 2008 Guidelines for gamete and embryo donation: a Practice Committee report. *Fertil Steril* 2008;90:S30-44

7. Posthumous reproduction : Ethics Committee of American Society for Reproductive Medicine. Fertil Steril 2004; 82:S260-2
8. Surrogate Motherhood ; ACOG Committee Opinion. Obstet Gynecol 2008; 111:465-70
9. American Society for Reproductive Medicine : defining embryo donation. Fertil Steril 2009; 92:1818-9
10. Interests, obligations, and rights of the donor in gamete donation. Fertil Steril 2009; 91: 22-27
11. Oocyte donation to postmenopausal women: Ethics Committee , American Society for Reproductive Medicine. Fertil Steril 2004; 82: S254-5
12. Family members as gamete donors and surrogates: Ethics Committee , American Society for Reproductive Medicine. Fertil Steril 2003; 80 : 1124-1130
13. Informing offspring of their conception by gamete donation: Ethics Committee, American Society for Reproductive Medicine. Fertil Steril 2004; 81: 52731
14. Essential elements of informed consent for elective oocyte cryopreservation: a Practice Committee opinion, American Society for Reproductive Medicine. Fertil Steril 2008; 90:S134-5
15. Life after death: Murder victim's mom plans his grandson (Feb 16/10)
www.wfaa.com/news/crime/Life-after-death-Murder-victims-mom-plans-his-gradson-84539022.html

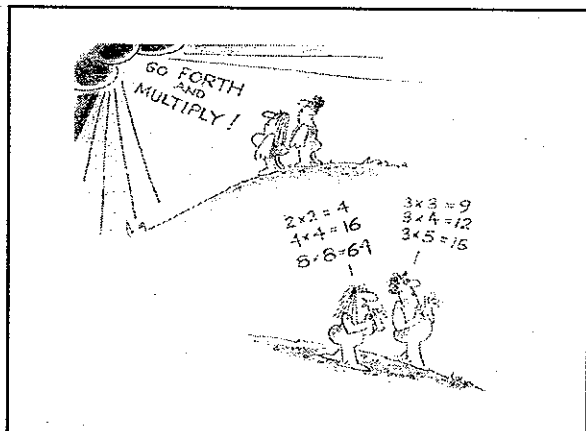


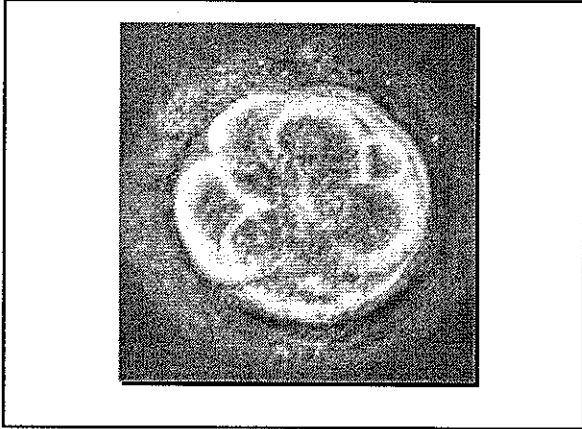
The Biotech Child of the Twentieth Century:

New Ways of Making Families
with Assisted Reproductive
Technologies


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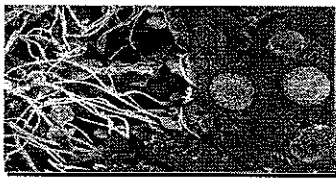
Posthumous Sperm Procurement
Evolving Reproductive Options in the U.S. and Abroad



Batzer, Horowitz, Caplan
Fertility and Sterility, 2003

Clinical Case Presentations

- X.X. is a 27 y.o. newly married man suddenly killed in a car crash
- Y.Y. was killed in a surfing accident, testicles arrive at the door of Women's Institute from a urologist.



Introduction to PHSP

- Posthumous reproduction is the birth of a child following the death of either parent
- Posthumous conception from cryopreserved gametes is commonplace
- As ART has progressed, it is even possible to harvest sperm from a newly deceased male for later fertilization
- This is termed posthumous sperm procurement (PHSP)

Historical Background

- The first published sperm harvest from a neurologically dead male was by Rothman in 1980
- The first published conception from PHSP was Diane Blood in Great Britain in 1995
- The first U.S. case was Gaby Vernoff in 1999

Rothman CM. Fertility & Sterility 1980
Shenfield, F. Law & Medicine 2000
Planchon S. J Am Acad Matrimonial Lawyers 2001

Historical Background

- In 1997 Kerr, *et al* surveyed ART programs in the U.S. re: PHSP
- They found 40 facilities nationwide received 80 total requests for PHSP from 1980 to 1995
- Of those, 15 facilities honored a total of 25 requests
- None of these programs had practice policies in place

Kerr, et al. Urology 1997

Material & Methods

- U.S. programs were identified by the SART database
- Canadian facilities were located using a dedicated website for ART facilities throughout Canada
- Standardized telephone interviews were conducted with personnel at 274 fertility centers in the United States and Canada over 5 months
- Letters were sent to the 50 participants, from 38 countries, of the International Federation of Fertility Societies to attain information regarding international prevalence and legal regulation

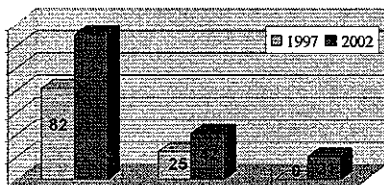
Society of Assisted Reproductive Technologies of ASRM. CDC 2000
www.ivfconnections.com/canivfclinics.htm

Participants in Internat'l Fed of Fertility Societies. Fertility & Sterility 2001

U.S. Results

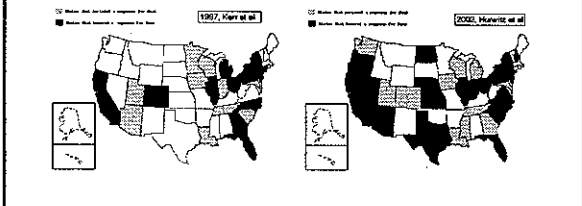
- 278 ART facilities in the U.S. (out of 375 total) responded to our survey
- 88 (32%) programs received a total of 131 requests for PHSP from 1995 to 2002
- 42 (32%) requests were honored for procurement by 32 (40%) programs
- 60% increase in requests & 68% increase in retrievals since Kerr, *et al.* In addition, 21 facilities have since established formal policies

U.S. Results
Figure 1



U.S. Results

Figure 2: Maps showing changing demographics of PHSP requests across the United States from 1997 to 2002.



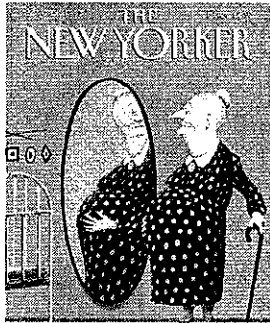
Countries	Legislation	Countries	Legislation
Argentina	No regulation	Japan	No regulation
Australia	Prior written consent	Jordan	n/a
Austria	n/a	Korea	Prohibited
Belgium	n/a	Mexico	n/a
Brazil	n/a	Norway	Prohibited
Canada	Prohibited, not aware of legislation	Poland	n/a
China	n/a	Portugal	No regulation
Czech Republic	Prohibited	Saudi Arabia	n/a
Denmark	Prohibited	Singapore	No regulation
Egypt	Prohibited	South Africa	n/a
Finland	n/a	Spain	Prohibited
France	Prohibited	Sweden	Prohibited
Germany	Prohibited	Switzerland	n/a
Greece	n/a	Taiwan	n/a
Hong Kong	Prohibited	Netherlands	Prohibited
Hungary	n/a	Turkey	n/a
Ireland	No regulation	UK	Prior written consent
Israel	Permitted, May need court order	USA	No regulation
Italy	No regulation	Venezuela	n/a

Discussion

- Ethical stakeholders:
 - Deceased
 - Requesting party
 - Resultant child
 - Physician
 - Society

Ethics: Deceased

- PHSP differs from the historical example of the slain soldier because a deceased sperm donor could not consciously contribute even to the procreative act
- Informed consent
 - Advanced directives uncommon
- Inferred or implied consent
 - Cancer patient
 - Abusing a corpse
 - Can you become a father after death?



Ethics: Requesting Party

- Does it have to be a spouse?
 - Girlfriend, parent, grandparent
- Motives?
 - Replacement husband or son
 - Social or financial stability through conception

Hecht vs. Kane 59 CAL.RPPR.2d222, 1996



Ethics: Resultant Child

- Does PHSP create doubt on the part of the child regarding his or her origins and place in society?
- Consequences for the child that cannot be foreseen or prevented until we have more experience in this area
- The well being of the resultant child should be the overriding concern of all involved

Ethics: Interest of the Physician

- PHSP is not a medically necessary procedure. Accordingly, there is no clear obligation for a physician to honor a request
- Shouldering the moral responsibility to respect the deceased's procreational rights
- Technical issues:
 - Potential for anomalies- no data
 - Infectious screening- similar to donor insemination
 - Counseling and support

Ethics: Interest of Society

- Societal responsibility to protect the interests of vulnerable persons such as the deceased and newborns
 - This is true whether the parent-child relationship is defined biologically, emotionally or legally
- Family lineage issues, the societal consequences of lifelong emotional stress, and proper inheritance rights

Legal Implications

- 1990 Nancy Hart received Social Security survivor benefits for her daughter
- 1995 Kolacy received the same benefits
- 1996 Hecht vs. CA Superior Court; gametes not a person nor legal property
- 1994 Rios case: children from preserved embryos are not heirs of the deceased
- 2002 Massachusetts Supreme Court is the first judicial ruling that established posthumously conceived children as legal heirs if certain strict criteria are met
 - *Woodward v. Commissioner of Social Security* 1302S.1C
- *In none of the above cases were gametes retrieved posthumously*

Religious Implications

- Modern Jewish theological law has considered PHSP and condones it if the deceased gave explicit or implicit consent to bear children with his wife even after his death
- The Roman Catholic Church prohibits any "separation of any dimension of any aspect of reproduction"
- Protestant denominational churches are more liberal and may vary in their approaches
- Islamic doctrine strictly prohibits any posthumous conception

Sample Protocol

- Documented consent, or at least inferred consent
- A reasonable requesting party
- Bereavement period of at least 6 months before use
- Ethics Committee approval if possible
- Time limits for storage
- No coercion
- Age of majority
- ID screening

Conclusions

- Increased requests, procedures and protocols
- Multiple stakeholders
- Multiple ethical dilemmas
- Establishing policies will increase uniformity
- International policy varies
- Impact of religious beliefs
- Clear guidelines will increase access
- Overriding concern for child's welfare

THIS IS THE GENETICIST WITH YOUR SURROGATE MOTHER. HERE'S YOUR SPERM DONOR AND YOUR FATHER'S CLONE. AND THIS IS ME HOLDING YOU WHEN YOU WERE JUST A FROZEN EMBRYO.

