Family Planning Options for Serodiscordant Couples

Many heterosexual couples are interested in having families, but for those couples who are serodiscordant (one partner is HIV+ and the other is HIV-), there are specific challenges to be faced. How do you have a family of your own without risking your health and the health of your family members?

What are the options?

For serodiscordant couples in Canada, family planning options are limited to the ***unadvised*** timed conception method, Assisted Reproduction Techniques (ARTs) such as artificial insemination, and adoption and fostering.

Timed Conception Method

The desire for one's own family can be strong, and some couples may ***unadvisedly*** risk infection by using the timed conception method (i.e., having unprotected intercourse during the woman's peak ovulation time). There is a 1-in-500 risk of infection to the mother, and potentially to the fetus, when this is attempted.[1]

Assisted Reproduction Techniques (ART)

Assisted reproduction techniques (ARTs) have been adapted for use with serodiscordant couples.

The process "sperm washing" has remained a component of ART for many years and involves separating the sperm cells from the semen and other cells, leaving a concentrate of healthy, motile sperm which can then be used to impregnate the woman using various ART techniques. In the case of a seropositive man, sperm is collected when the man has a low viral load and then "washed." Sperm washing has been shown to reduce the risk of transmission of HIV to the woman or the unborn child.[2]

Artificial Insemination (AI)

Artificial insemination using either washed sperm from a seropositive male or donor sperm is a common procedure with few side effects and is typically used to help couples with infertility issues or women without a male partner. Artificial insemination using the intrauterine insemination (IUI) technique is the most common artificial insemination procedure. All artificial insemination procedures involve processing the sperm before insemination. Sperm is typically washed in order to remove the seminal fluid and concentrate the sperm to increase the probability of fertilizing the egg.

The success rate for artificial insemination is dependent on the age of the woman and the quality of the sperm and egg. Generally, women under thirty-five years of age require fewer attempts to achieve pregnancy than older women. The overall pregnancy rate is approximately 15 per cent per cycle i.e., per woman's monthly cycle.[3]

There are numerous clinics across Canada that provide donor sperm and perform the artificial insemination procedure.[4] The cost for this procedure ranges, but a basic per cycle rate is approximately $2,000 – 3,000.[5] Artificial insemination using donor (HIV-) sperm is currently the only assisted reproduction technique that is widely available and accepted in Canada.

Within Canada, donor sperm is regulated by Health Canada's Food and Drug Act: *Processing and Distribution of Semen for Assisted Conception Regulations*. All semen donors are anonymous and are screened for medical and genetic diseases as well as sexually transmitted infections including

HIV and hepatitis. All specimens are quarantined for a minimum of six months, and donors are retested to ensure that they are negative for these infections. Specimens are accompanied by detailed profiles of the donor, including individual and family health history and physical characteristics.[6]

Using Washed Sperm from an HIV+ donor

For several years clinics in the United States and Europe have been using assisted reproduction techniques (ARTs) and washed sperm from the male in a serodiscordant couple. At the July 2002 World AIDS Conference, Dr. Valeria Savasi of the University of Milan reported that 1,500 serodiscordant couples had undergone 4,000 cycles of intrauterine insemination (IUI) with washed sperm in their clinics.[7] There have been no cases of HIV transmission to either the women or their children, and the pregnancy rate is about eight per cent per natural cycle and about eighteen per cent per stimulated cycle. [8]

In the United States and Europe, there are four ART techniques which can be used in conjunction with washed sperm from a male who is seropositive:

i) intrauterine insemination (IUI),
ii) in vitro fertilization (IVF),
iii) intracytoplasmic sperm injection (ICSI),
iv) cervical cup insemination.

In Canada, only the first option (IUI) is currently available in a limited number of clinics to serodis-cordant couples. However, at the present time, Canadian clinics or the Canadian Hemophilia Society (CHS) can direct you to US clinics that will use the other techniques.

i) Intrauterine insemination using washed sperm (IUI)

In this procedure, the washed sperm is injected into the uterus using a catheter to bypass the upper vagina and cervix. This is done during the most fertile period of the woman's cycle. In some cases the woman may undergo fertility treatment to stimulate successful ovulation.

ii) In vitro fertilization using washed sperm (IVF)

In vitro fertilization (IVF) involves surgically removing eggs from the woman's ovaries, placing them in a laboratory dish, and mixing them with washed sperm. Once the eggs are fertilized by the washed sperm they are placed directly into the woman's uterus.

iii) Intracytoplasmic sperm injection using washed sperm (ICSI)

Intracytoplasmic sperm injection (ICSI) is similar to in vitro fertilization in that it is done outside the body in a laboratory dish. Eggs are retrieved from the woman's ovaries, and a single washed sperm is injected into one egg. The embryo or embryos are then placed in the woman's uterus.

iv) Cervical cup insemination using washed sperm

Bedford Research Foundation in Bedford, Massachusetts offers women with no apparent fertility problems the option of an oligospermic cup procedure.

This is a new clinical trial initiated in 2002. An oligo-spermic cup is a modified cervical cap. At the time of ovulation, the physician will place the cup over the cervix and add the washed sperm from a seropositive male. The woman will also be prescribed one dose of anti-retroviral medications at the time of the procedure. This procedure is far less invasive than IVF or ICSI.

In the above procedures, IUI, ICSI and IVF, fertility drugs may be used in order to regulate the woman's cycle and ensure there are sufficient eggs.

Availability and Costs

With the exception of IUI, the ART options described above are not currently accepted practice for serodiscordant couples, and therefore not available in Canada to men or women who test positive for HIV, hepatitis B, or hepatitis C.

In Canada, artificial insemination using IUI is an option, but its practice is not generally accepted or widely available. IUI performed within Canada is the least expensive option at approximately $3,000 per cycle. The costs associated with IVF and ICSI using donor semen start at $5,000 and can exceed $15,000 per cycle. Keep in mind that there is no money-back guarantee if these procedures do not work.

Serodiscordant couples may have access to programs in the United States or Europe should they wish to pursue any of the programs not available here, but the cost can be prohibitive. There are approximately ten centres in Europe, and several of them accept Canadians for treatment. Unfortunately, it is challenging to find contact information. There are a few programs in the United States, and the most accessible for serodiscordant couples in Canada is the Special Program of Assisted Reproduction (SPAR) at Bedford Research Foundation in Bedford, Massachusetts (www.duncanholly.org).

About SPAR

SPAR assists serodiscordant couples in achieving a pregnancy when intercourse would put the mother and child at risk of infection from the father. SPAR offers IVF and cervical cup insemination. SPAR also offers a sperm washing and testing service that allows couples to take processed (clean) sperm to a clinic closer to home for the actual ART procedure. In theory, Canadians can do this, but this practice is not yet widely accepted. You may encounter difficulty finding a physician or clinic willing to work with the cleaned sperm because of the perceived risks to staff and other patients.

SPAR works with physicians in Boston as well as six other clinics in the United States. These clinics are located in Oregon, Washington, Arizona, New Jersey, Illinois and Tennessee. Because of the controversial nature of the program, Bedford Research Foundation will not supply the names of the clinics until the patient is formally in the program. Bedford Research Foundation also encourages patients to speak to their local infertility clinic or reproductive endocrinologist to ask whether they would be willing to use washed and tested sperm from SPAR in their ART program.

Travelling Abroad for Fertility Assistance

Travelling to the United States or Europe for ART treatment can be financially prohibitive. The treatment itself can cost up to $30,000 US for just one cycle. Individuals also need to consider the normal costs associated with travel and accommodation. The woman needs to be at the clinic during the days before and after insemination.

ART as an Option for Serodiscordant Couples in Canada

In some US states, such as Florida and California, there are laws preventing the transfer of bodily fluids from infectious persons. In Canada, there is no such law: the policy appears to have been established by the individual clinics out of concern for public health. Clinics fear the possibility that an error in the process might contaminate or endanger other specimens or persons, as well as put the person being treated at a perceived risk. To ensure the highest degree of safety, clinics identified the need for two separate sets of equipment. Clinics in Canada argue they have neither the budget nor the volume of seropositive clients to justify this expense.

As a serodiscordant couple wishing to use sperm from a seropositive male to have your own children, you may find it difficult to locate a fertility clinic or program in Canada that will provide you services. The use of sperm washing for the seropositive male combined with intrauterine insemination (IUI) is being done, but only on a limited basis in a few clinics. In order to advance, it will be necessary to approach local fertility programs and clinics to drive home the need for this type of service in the broader community. Removing barriers and gaining wider professional acceptance are the challenge we face together as a community. Serodiscordant couples who are not allowed access to these procedures could possibly argue that their human rights are being denied.[9]

If you are interested in this option, please contact your local chapter of the CHS.

Fostering and Adoption

Serodiscordant couples who want to have a family may consider fostering or adopting a Canadian child as another way to build their family. There is also the option of adopting a child from a foreign country.

Fostering and adoption services in Canada are subject to the Canadian Charter of Rights and Freedoms and the Human Rights Code of each province and territory. Both fostering and adoption are open to couples and singles, heterosexuals and homosexuals, couples of different ethnicities, and to people with varying degrees of child care experience — as long as the applicants have the child's best interest in mind and they meet the criteria set out by each province and territory.

Given that the welfare of the child is the most important factor in fostering and adoption, concerns about the health of the potential adoptive parents can be an issue when applying. As part of the application process, the health of the individual or couple, as well as the family as a whole, is evaluated and considered.

It is important to note that adoption and fostering decisions are made on a case-by-case basis, and it may be worthwhile to investigate this option.

Fostering

Children in foster care are there for many reasons including physical, sexual or emotional abuse, neglect, family conflict, parental issues such as substance abuse, marital problems, mental health, or a parent's death. On average, a child will stay with a foster family from six months to a year. Some children need permanent foster care or an adoption placement.

The criteria and the application process may vary slightly in each province/territory; generally the minimum requirements include residence in the region, general good physical and mental health, financial stability, a stable relationship, consent of all immediate family members, no criminal charges pending or significant criminal background, no verified or suspected incidents of child abuse, willingness to learn new skills, and sensitivity to cultural differences and the backgrounds of the children.

If a person fulfils the minimum requirements, the next step is to apply. Once again, the application process may vary slightly in each province/territory; generally speaking, it includes attendance at an orientation session, mandatory training sessions, and – most importantly – an extensive home study which includes personal and family interviews, references, medical, and police record checks.
The entire process may take between four and nine months. Once a family is approved and a child is placed, ongoing professional support from social workers and access to therapeutic services can be provided to those children who may be in need.

Foster parents are paid a daily board rate per foster child or youth in their home. Other expenses are usually covered, such as clothing, medical and dental needs, and school and recreation related costs.

Adoption

Adoptions can be arranged, either through various agencies in each province and territory, such as one of the 52 Children's Aid Societies (CAS) in Ontario, through a private agency that provides services for domestic adoptions, or through an agency that specializes in foreign adoptions.

i) CAS Adoptions

The CAS requires that the potential adoptive parents apply through the CAS in their province/region. On a regular basis, the CAS presents the profiles of children available across the province/region at an adoption resource exchange. Anyone from the province/region with an approved adoption homestudy can view information about children currently available for adoption.

The adoption process through the CAS is the same as the fostering process, including the extensive homestudy. The welfare of the child is the chief priority, and it may take a while to find a child. Once a match is made, the child is placed with the family and there is a probation period. If the adoption probation is successful and the CAS feels that it is in the best interest of the child to remain with the adoptive family, then the adoption will be presented to the provincial family court . Adoptions are final and irrevocable. There are no fees for an adoption performed through the CAS.

ii) Private Adoption

Private adoption is another option for prospective parents. To initiate the process one must contact a government approved licensee. A licensee is responsible for co-ordinating a private adoption and is most often a social worker or a lawyer (a list of licensees is available from each provincial/territorial ministry responsible for community, family and children's services). It is also possible for a potential adoptive family to approach a licensee to arrange a placement if the family has found a birth parent or couple who would like to place a child for adoption.

Once a prospective family has established a relationship with a licensee they are assigned a ministry approved adoption practitioner. The adoption practitioner will conduct the homestudy. Overall, the process for private adoption is the same as a CAS adoption, including the homestudy process.

A private adoption, unlike a CAS adoption, involves fees for the services of the licensee, the adoption practitioner, and any other services the licensee must arrange for with respect to the adoption.

The ministry allows the licensee to charge only for certain fees, disbursements and expenses listed in the provincial regulations. (For example, in Ontario these are Regulations 70, R.R.O. 1990, s.58.) It is against provincial law for birthparent(s) placing children for adoption to be paid or to be charged for services. The cost of the fees to the licensee varies from $10,000 to $14,000.

iii) Foreign Adoptions

Foreign adoptions are more complicated than a CAS or a domestic private adoption. Requirements vary from country to country and are regulated under provincial adoption laws, federal immigration laws, and the laws of the child's country of origin. As well, adopting parents are responsible for arranging the sponsorship of the child through a Canada Immigration Centre.

This process should be initiated early in the adoption process.

In general, most international adoptions are completed in the child's country and are governed by *intercountry adoption acts* in each province and territory. A small number of adoptions are completed in each province and territory and are governed by the c*hild and family services acts* in the respective province and territory. In both types of adoption, the provisions of the Hague Convention on Intercountry Adoptions (an international treaty that sets out the framework for foreign adoptions[10]) apply where the child's country has implemented the Hague Convention.

Prospective parents must use the services of a licensee or licensed international adoption agency. These services are licensed by each provincial ministry responsible for c*ommunity, family and children's services*. A listing of licensees and international adoption agencies is available from these ministries.

There are three requirements that prospective parents must fulfil before leaving Canada or completing the adoption abroad. They must apply to adopt through a provincially licensed international adoption agency, obtain a homestudy prepared by an approved adoption practitioner (this is the same type of homestudy as for CAS fostering and adoptions and private domestic adoptions), and have the appropriate officials in the ministry approve the application based on a review of the homestudy and supporting documentation. The licensee or a licensed international adoption agency is responsible for the management of the process until the adoption is completed. They ensure that the laws related to the international adoption in each province/territory, Canada, and the child's country of origin are followed, and take care of all the paperwork and procedures until the adoption is completed.

The adoption authorities in the child's country are responsible for deciding which child to propose to a person or couple. Usually they forward the proposal to the licensed international adoption agency, which is then responsible for presenting the proposal to the prospective parents for review and consideration.

An international adoption is expensive. The total cost varies from $20,000 to $35,000 depending on the adoption requirements in the child's country and the services required to complete the adoption. In general, prospective parents should expect to pay for the following:

- Adoption practitioner fees to prepare the homestudy, review the adoption proposal and compile progress or follow-up reports
- Licensee or licensed international adoption agency fees
- Translation of documents, notarization and authentication of documents
- Federal immigration fees for sponsorship visa applications, medical examinations, etc.
- Provincial/territorial ministry fee for adoptions completed outside Canada, for reviewing the homestudy and adoption proposal, correspondence and liaison with adoption service providers, the Federal Government, and foreign adoption authorities, etc.
- Travel and living expenses for you and your child while in-country
- Visa and passport for the child from the child's country of origin

The licensed international adoption agency or licensee will develop a service agreement with the prospective parent. It will include an estimate of expenses for the entire adoption process. It is important to ensure that the fee schedule and all costs are named. If there are questions about a specific fee they can be discussed directly with the agency or with the provincial/territorial ministry responsible for community, family and children's services.

A Few Final Words

As a society we continue to learn more about living with HIV infection every day. Advances in treatment have resulted in a significant improvement in quality of life and life expectancy. The desire to live life to the fullest and have a family is only natural and not unreasonable.

If you are living with HIV and you want to start a family, you have a number of options. No matter what way you and your partner decide to start your family, be sure to make your decision an informed one. Stay in contact with the Canadian Hemophilia Society and the local Chapter in your area. Discuss your situation with your physician and explore any contacts he or she may provide. Don't be afraid to approach an infertility clinic for a consultation. Don't be afraid to approach an adoption agency should you decide to apply.

In order to advance, it is necessary to approach infertility clinics and adoption agencies to identify the needs of our community. If we remain silent the situation will not change, and our needs will never be addressed. Removing barriers and gaining wider acceptance are the challenges we all face together as a community.

For additional Information:

Contact the ministry responsible for community, family and children's services in your province or territory. Here is a list of web-links to provincial and territorial governments:

NEWFOUNDLAND AND LABRADOR – www.gov.nf.ca

PRINCE EDWARD ISLAND – www.gov.pe.ca/index.php3

NOVA SCOTIA – www.gov.ns.ca

NEW BRUNSWICK – www.gnb.ca

QUÉBEC – www.gouv.qc.ca/wps/portal/pgs/commun

ONTARIO – www.gov.on.ca

MANITOBA – www.gov.mb.ca/splash.html

SASKATCHEWAN – www.gov.sk.ca

ALBERTA – www.gov.ab.ca/home/index.cfm

BRITISH COLUMBIA – www.gov.bc.ca/bvprd/bc/home.do

YUKON – www.gov.yk.ca

NORTHWEST TERRITORIES – www.gov.nt.ca

NUNAVUT – www.gov.nu.ca

Contact Information

Canadian Hemophilia Society:

Suite #505 - 625 President Kennedy Avenue,
Montreal, QC H3A 1K2
Toll-free: 1-800-668-2686
Montreal local: 514-848-0503
Email: chs@hemophilia.ca
Website: www.hemophilia.ca

Artificial Insemination with Donor Sperm

Ask your physician for a clinic referral or check the yellow pages for fertility/infertility clinics in your area. The following Websites have listings of clinics across Canada.

Family Helper: www.familyhelper.com
Infertility Awareness Association of Canada: www.iaac.com

ART with Washed Sperm

CANADA
Southern Ontario Fertility Technologies
Dr. James Martin,
Clinic Medical Director
555 Southdale Road,
Suite 107
London, Ontario
N6E 1AT

Tel: (519) 685-5559
Email: drmartin@soft-infertility.com
Web: www.soft-infertility.com

UNITED STATES
Special Program of Assisted Reproduction (SPAR)
Bedford Research Foundation
PO Box 1028
Bedford, MA
01730 U.S.A.
Tel: (781) 665-0750
Email: info@duncanholly.com
Web: www.duncanholly.org

Columbia Presbyterian
Medical Center
New York City, New York

EUROPE
Sao Paolo Hospital
Milan, Italy

Beratungsstelle Gynokologische
Endokrinologie und
Reproduktionsmedizin
St. Gallen, Switzerland

The Chelsea and Westminster Hospital,
London, England

Universitatsfrauenklinik Wien,
Vienna, Austria

KIS - Curatorium for Immunedeficiency
Munich, Germany

Endnotes

[1] C. Gilling-Smith, "HIV prevention: Assisted reproduction in HIV-discordant couples." *AIDS Reader* (2000):10 (10):581-7; available from www.medscape.com/viewarticle/410325; Internet, accessed March 3, 2005.

[2] J.E. Pena, J. Klein, M.H. Thornton II and M.V. Sauer, "Providing assisted reproductive care to male haemophiliacs infected with human immunodefiiciency virus: preliminary experience,"*Hemophilia* (2003): 9:309-316.

[3] P.R. Grindoff, and R. Jewelewicz, "Reproductive Potential In Older Women," Fertility & Sterility (1986)46:989 for conception rates in normal healthy couples according to age cited with reference as indicated here available from www.genesis-fertility.com/facts/index.htm ; Internet, accessed March 3, 2005.

[4] Robin Hilborn, ed., *Fertility Clinics in Canada* (Southampton, ON: Family Helper), available on www.familyhelper.net/iy/iyclin.html; Internet, accessed March 3, 2005.

Infertility Awareness Association of Canada, *Canadian IVF Clinics and Associates (*Montreal. PQ: Infertility Awareness Association of Canada), available from www.iaac.ca/english/ivf/index.asp; Internet, accessed March 3, 2005.

Health Canada, Health Products and Food Branch Inspectorate*, List of Canadian Physicians and Establishments that Process, Distribute and/or Import Semen for Assisted Conception,* May 14, 2004; available from www.hc-sc.gc.ca/hpbf-dgpsa/inspectorate/can_sem_est_cp_e.html : Internet.

[5] For examples of Canadian costs see Genesis Fertility Centre, *Listing of Non-insured Fertility Services*; August 2004 (Vancouver BC: Genesis Fertility Centre); available from www.genesis-fertility.com/fees/index.htm: Internet, accessed March 3, 2005.

[6] Health Canada, Health Products and Food Branch Inspectorate, *Guidance on the Processing and Distribution of Semen for Assisted Conception Regulations (Guide -0041,* September 2004: available from www.hc-sc.gc.ca/hpfb-dgpsa/inspectorate/gui_0041_tc_e.html ; Internet.

[7] V. Savasi, T.Persico, M. Oneta, C.Lanzani, M. Crivelli, M.Di Grandi, J.A. Morgan, E. Ferrazzi, Department of Obstetrics and Gynaecology, Luigi Sacco Clinical Sciences Institute, University of Milan Medical School, via GB Grass 74, 20157, Milan, Italy (MoOrE1070), *Intrauterine Insemination in HIV-Serodiscordant Couple for Male HIV Infection*, Proceedings of the XIV International AIDS Conference, Barcelona, Spain, 8 July 2002. Copy of abstract is no longer available on the congress website. See summaries of Aberg for the 2002 Body Health Resources Corporation and the National AIDS Treatment Advocacy Project in New York, New York.

[8] Summary 1
Aberg, Judith A., E.d., Intrauterine Insemination in HIV- Serodiscordant Couple for Male HIV Infection (MoORE1070), authored by Valeria Savasi, T.Persico, M. Oneta, C.Lanzani, M.Crivelli, M. Di Grandi, J.A. Morgan, E. Ferrazzi, (The Body: The Complete HIV AIDS Resource: 2002 Body Health Resources Corporation): available from www.thebody.com/confs/aids2002/aberg2.html: Internet, accessed March 3, 2005

Dr. Valeria Savasi from the University of Milan presented the latest results from this sperm washing insemination program for HIV discordant couples (in this case, the women are HIV negative and males are HIV positive) Dr. Savasi did not discuss other option, such as artifiicial insemination by a donor or adoption.

Dr. Savasi quoted estimates that 50 percent of fertile couples conceive in six months when having at least two episodes of unprotected sexual intercourse per week. Obviously having unprotected sex among an HIV discordant couple could lead to transmission of HIV to the uninfected partner. Previous studies have noted that the risk of transmitting HIV via vaginal intercourse is dependent upon the amount of HIV in the semen as well as other female host factors. Mandelbrot and colleagues (Lancet 1997) previously reported four HIV seroconversions among 92 HIV negative women who became pregnant by HIV positive partners.

Dr. Savasi made an excellent point that all couples should be screened fiirst for infertility problems such as genital tract infection sperm immobility or low counts, female genital disorders such as endometriosis, tubal dysfunction or anovulatory cycles.

The actual technique of sperm washing is relatively easy. The semen is collected and immediately processed in a percoll gradient and centrifuged. The sperm settle to the bottom. Previous studies have shown that it is the non sperm cells that contain HIV. The sperm pellet is then washed and the motile sperm swim up against the gradient and are collected into two aliquots, one for insemination and one for HIV RNA testing by nucleic acid sequence based amplifiication (NSBA) If the saple reveals less than the lower limits of detection for HIV (less than 800 copies /ml), the other aliquot can be artifiicially inseminated when the woman is ovulating. Although the abstract text reports 449 intrauterine inseminations in 175 couples, Dr. Savasi stated that over 4000 inseminations in over 1500 couples have been done since their program began. She did not state what the pregnancy rate was, but in the abstract she reported 10 percent. It is noteworty that there has been no transmission of HIV to the uninfected female partners. I believe this will be a more commonly employed technique over the next few years. I discussed this presentation with a few obstetric colleagues at the meeting who agreed that this methodology was relatively easy and inexpensive and is especially attractive if it results in the decreased transmission of HIV.
July 8, 2002

Summary 2

National AIDS Treatment Advocacy Project, *Sperm Washing in Pregnancy in HIV,* based on Intrauterine Insemination in HIV-Serodiscordant Couple for Male HIV Infection (MoORE1070), authored by Valeria Savasi, T.Persico, M. Oneta, C.Lanzani, M.Crivelli, M. Di Grandi, J.A. Morgan, E. Ferrazzi Intrauterine Insemination in HIV- Serodiscordant Couple for Male HIV Infection (MoORE1070), (New York, NY: National AIDS Treatment Advocacy Project): available from www.natap.org/2002/august/082702_1.htm: Internet, accessed March 3, 2005.

Now that HIV infected persons are living improved lives, many couples are interested in having babies. In her abstract Savasi said that to-day, with the use of combined antiretroviral therapies, the life expectancy of HIV infected patients is 30 years. These couples lead a practically normal life, which includes the wish to conceive a child.

In the past, sperm washing was available but new. At this year's Barcelona International AIDS Conference Dr. Valeria Savasi from the University of Milan presented her latest results from their sperm washing insemination program. It is my understanding that the Columbia - Presbyterian Medical Centre in New York City has a similar program. She did not discuss cost.

Savasi reported that her program's goal is to assist HIV infected males and their seronegative female partners wishing to have a child by offering timed intrauterine insemination after sperm washing. The desire for a child is spontaneous in a stable couple, and today, HIV discordant couples should be considered as people that live with a chronic illness.

Savasi reported that in her Clinic they have assisted 400 HIV-1 discordant couples (HIV+ men, HIV- women) from 1999 to 2001. Infertility screening is conducted for each couple. It is important to make sure infertility is ruled out fiirst before starting th insemination program. Intrauterine insemination is performed the same day ovulation is assessed by ultrasound checking. The semen sample is collected by masturbation in a sterile vial, and within two hours the semen is washed by a combined method: centrifugation on a discontinuous gradient, washing, and migration by swim-up at 37degess C and 5% CO_2 for 1 hour. The motile spermatozoa that migrate to the top of the sperm medium after 1 hour are divided into two aliquots; one aliquot is used for the insemination, and the other is tested for the presence of HIV-1 RNA by PCR. They have carried out 449 intrauterine inseminations in 175 couples, of which 240 had stimulated cycles and 209 had spontaneous cycles. The pregnancy rate in both cases was 10%. None of the female patients had a seroconversion. According to Savasi, she has conducted 4000 inseminations for 1500 couples.

Savasi concluded that infertility screening, treatment of genital tract infections, sperm washing and intrauterine insemination reduce the risk of sexual transmission in order to achieve a conception. Finally Savasi said that in order to reduce the risk of HIV sexual transmission in serodiscordant couples through unprotected intercourse, including avoiding transmission to the child, the better option for a safe pregnancy is the sperm washing technique.

[9] Merle Spriggs and Taryn Charles, "Should HIV discordant couples have access to assisted reproductive technologies?" *Journal of Medical Ethics,* September 2002; available from jme.bmjjournals.com/cgi/data/28/1/DC1/13 ; Internet, accessed March 4, 2005

[10] Citizenship and Immigration Canada, International Adoption and the Immigration Process, *The Hague Convention,* June 28, 2002 : available from www.cic.gc.ca/english/sponsor/adopt-4.html#8 : Internet: accessed March 4, 2005.

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