Needlestick Injury:
My Personal Story

By Marjorie G. Kallstrom, R.N., (CPN)C

During the summer of 1996, while "scrubbed" on a vaginal hysterectomy, I received an accidental needlestick injury from a contaminated, blood covered suture needle. At the time of the occurrence the patient/client was bleeding profusely. I immediately informed the surgeon, surgical assistant and circulating nurse of my injury, exclaiming "I've been stabbed!". It took approximately five seconds for the ramifications of the injury to register in all of us. While removing my outside gloves I asked my circulating nurse to get the bleach bottle and the two of us began our immediate first aid. We ran the bleach over the area and I proceeded to manually express blood from the puncture site with my left thumb. During this time I maintained my sterile field; the surgeon kept suturing and the bleeding was controlled. I regowned, gloved and finished the case. The case ended approximately 15 minutes after my puncture.

Prior to doing the surgery, I had introduced myself to our patient/client. A pleasant, young female with many tattoos. The surgeon had given me a brief history prior to the case which included information pertaining to her use of I.V. drugs and a positive Hepatitis C test. There was no H.I.V. information on the chart.

The next few hours after my exposure were similar to a roller coaster ride. I was drawing from my waning grey cell supply to remember the "Needlestick Injury Policy and Procedure". From the O.R. suite, I headed to our first aid station in emergency. While there, I remembered there were "some drugs" I should start taking within a short time period. I shared this information with the E.R. nurse who promptly looked for a "Needlestick/Sharps Injury Package", and the two of us went through the material. Enclosed in the kit was an envelope with this label:

Accidental Exposure Kit

- One vial Zidovudine 50 x 100mg Cap
- One vial Zalcitabine 15 x 0.750 mg Tab
- One information handout
- Do not remove contents - give to patient intact.

St. Paul's Hospital, Vancouver, BC

The information was three pages, approximately 3,000 words and included 11 subtitles.

1. **Confidentiality.**
2. **Risk of H.I.V. Infection After Exposure.**
3. **Reasons for taking Antiretroviral Therapy**
4. **What is Zidovudine?**
5. **What is Zalcitabine?**
6. **Evidence that ZDV Can Prevent H.I.V. Transmission.**
7. **Possible Side Effects and Contraindications of Antiretrovirals.**
8. **Instructions For Taking ZDV and ddc.**
9. **How Long Before An Exposed Person Can Be Reasonably Sure That They Have Not Been Infected.**
10. **Precautions To Avoid Transmissions to Others.**
11. **Other Reminders.**

Author

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I skimmed through the first six subtitles until I found Number Seven, Possible Side Effects and Contraindications of Antiretrovirals. The subjective toxicity, such as fatigue, nausea and headache were a non-item. As I am a wife, mother and perioperative nurse I had experienced all, often! My concerns were with the objective toxicity. The drugs were contraindicated in persons with liver or kidney insufficiency, or anemia. However, I had none of these contraindications.

Using the "Definition of H.I.V. Exposure" sheet included in the package, I determined I was a "Probably parenteral exposure to H.I.V. and Hepatitis." I immediately took the medications - forty minutes had lapsed since exposure. The drugs would have to be taken eight times daily for one month as prescribed. The first aid nurse and I filled out lab requisitions including baseline H.I.V. and Hepatitis B and C. Prior to going to the lab I phoned the O.R. Suite and asked the Charge Nurse to request the surgeons get permission from the patient for H.I.V. testing. It was at this time I was beginning to really recognize the danger this "needlestick incident" represented for myself, my family, friends and co-workers. There is no cure for Hepatitis C and H.I.V. exposure was a possibility. These thoughts were screaming through my head as I went to the lab and had blood drawn. From there I headed back to the O.R. where the surgeon involved was waiting for me. He reassured me that he had talked to our patient in recovery and she had consented to H.I.V. testing, which was being done at that moment. While talking to the surgeon, a friend and co-worker for many years, I realized how much his part in the incident had affected him.

Waiting for the H.I.V. results from the patient would take five to ten days. Counseling from our personnel health care department began immediately. The information available to me was both current and informative. The risks involved for my family were explained to me and I was given copies of all the information pertaining to H.I.V. and the different types of Hepatitis for them to read. Never before had I appreciated the risks involved, and steps necessary, following a contaminated needlestick injury. Now I was faced with telling my husband and children what their part would be in protecting themselves from me.

Within a few hours of taking the antiretroviral medication I had developed a headache, severe nausea and light-headedness.

"Are you going to die Mom? " ...

"How long before you'll know if you'll be alright? " ...

"Can we kiss you?"

That evening, in hushed silence, my husband and two youngest children listened to my story. The questions began to flow from my 17 year-old son and 19 year-old daughter. They were blunt and to the point - Are you going to die, Mom? - How long before you'll know if you'll be alright? - Can we kiss you? and for levity's sake, - What colour condoms would you like us to buy for you? My husband and I were looking forward to a long planned "25th Wedding Anniversary" holiday in a few days. Our older kids eventually heard the "news" from their younger siblings and over the next few days and weeks, kept in touch and wanted to be informed of good/bad news.

The first week of medications, contained in the kit, made me extremely ill. I felt very similar to my memory of first trimester twin pregnancy, the difference was, there was no relief from the nausea. It was with me twenty-four hours a day for the first week. Through consultation with my family doctor and the B.C. Centre for Excellence in H.I.V./A.I.D.S., the medications were changed to help reduce the side effects. The prescriptions were sent from St. Paul's Hospital to my family practitioner's office where I picked them up.

During that first week, information from the surgical patient and her family physician indicated her lifestyle had been "clean" for over a year. Although I

never had contact with the patient again, she made it very clear that she was willing to undergo any tests that would help to alleviate my concerns. I was very fortunate and grateful for her cooperation.

Through the next few weeks, I continued to take the medications. Keeping busy, in and outside the workplace, helped me cope with the side effects of the medication. During this period I lost ten pounds, which was the only bonus, and became acutely aware of problems involved taking H.I.V. medication. My Hepatitis B titre was low so I received a booster. For the next year I was routinely tested for Hepatitis and H.I.V.

Conclusion

I want to emphasize how important it is that everyone involved in health care make themselves aware of the individual facilities' policy regarding needlestick injury. If injured, bleed wound freely, cleanse with soap and water and disinfect with alcohol or other disinfectant. Know where the closest supply of medications for exposure is kept. Be certain your first aid personnel know the medication should be taken within one hour of injury if possible. Also, a review of your injury, its implications and severity should be reassessed by yourself and health care department after beginning your medication. Your family physician can use the H.I.V./A.I.D.S. hotline numbers for more information.

Know the precautions to avoid transmission:

- Abstain from sexual intercourse or use latex condoms with non-petroleum lubricant.
- Do not become pregnant, do not breast feed.
- Do not share toothbrushes, razors, etc.
- Do not donate blood, plasma, organs, tissue or sperm.

These are some of the precautions.

There is only one place for a needle/sharp after its use and that is in an appropriate disposable container.

This includes using containers on our sterile fields. No one should put themselves or anyone working in their facility at risk by using folded towels, medicine cups, or kidney basins inappropriately for used sharps. Our advantage in the O.R. is that we are aware who our sharps have been used on. C.S.D. and Housekeeping staff do not have this advantage.

If you are in a position to consent to take antiretroviral medication, be sure it's "informed consent." Perhaps in recognizing the implications of needlestick injury we can make ourselves and our coworkers practice safer use and disposal of sharps.

My injury happened two years ago and some of the medication and dosages have changed. Also, screening for H.I.V. is much quicker today. For health care workers in smaller units, you may have to call in another staff member to replace you while you seek medical attention and advice. Be prepared, be aware, and use safe practice. ■

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Reflections of a Canadian RNFA

Past, Present and Future

By Grace Groetzsch RN, BScN, MEd, CPNC), RNFA

At present I am one of three formally trained Registered Nurse First Assistants (RNFA) in Canada and the only one employed in that capacity. To become an RNFA one must be a registered nurse with a minimum of two years experience in perioperative nursing, and must have obtained perioperative certification (CNOR, CPN(C)), Advanced Cardiac Life Support (ACLS) and/or Basic Cardiac Life Support (BCLS) certification, letters of recommendation and liability insurance. I am currently insured through an American carrier affiliated with AORN. At present, a degree is not necessary but after 1999 in the United States a degree will be required to write the perioperative certification examination(CNOR) and hence to become an RNFA.

In 1980 the American College of Surgeons stated that an RN, with additional training was acceptable as an assistant should a surgeon, resident or fellow not be available. By 1983 RNFAs were able to assist in 17 states. As of 1996, RNFAs are recognized and practicing in all 50 states.

Jane Rothrock, an internationally recognized expert and advocate of RN First Assisting started the first RNFA program in the United States in 1985 at Delaware County Community College in Media, Pennsylvania. There are currently 19 programs affiliated with colleges and universities in the United States graduating RNFAs. I was fortunate to attend Jane's course. At present there are no RNFA programs in English speaking Canada. There is one program in Quebec and a curriculum is being developed at the British Columbia Institute of Technology (BCIT).

Most RNFA programs are structured on Jane Rothrock's model and follow AORN Recommended Education Standards for RN First Assistant Programs. Pre-course material is done by correspondence followed by six days of didactic classroom instruction with RNFA and surgeon faculty members. A supervised clinical internship encompasses one academic semester and a minimum of 120 clinical hours. My pre-course study and didactic instruction was completed between January and May, 1997. To align with the academic calender I began my internship in September. In order to develop my newly learned skills I participated in a pre-internship from June to August, 1997.

Pre-internship

Surgical and hospital, as well as nursing support are important to introduce the RNFA role. Encouraged by my OR manager, I volunteered my services three days a week as a RNFA pre-intern at my place of employment, the Orthopaedic and Arthritic Hospital, Toronto. Two days a week I continued to work as a paid perioperative staff nurse. I was reluctant to pre-intern at my own hospital for a variety of reasons. Physicians assisted routinely and I did not want to get in the way and what would happen if I failed?

Author

Grace Groetzsch RN, BScN, MEd, CPN(C), RNFA, is a full time RNFA employed by the cardiac surgeons at Sunnybrook Health Science Centre, Toronto. She is also a staff nurse in the operating room at the Orthopaedic & Arthritic Hospital, Toronto.

This is an abridged version of her presentations in April 1998 to the BCORNG Conference, Harrison Hot Springs, BC, and the ORNAO Conference, Niagara Falls, Ontario.