Exposure of Patients to HIV and Hepatitis C During Surgical Procedures

Mark S. Davis, MD
Operating Room Safety Consultant
www.Irresponsiblethebook.com
msdavismd@aol.com

Author, “Irresponsible; What Surgeons Won’t Tell You and How to Protect Yourself”
(Available: Amazon.com Kindle Download for All Devices)
A Hidden Risk of Surgery

• Potentially deadly BBP infections
• Preventable - how?
• Knowledge and technology available to surgeons to reduce risk but often choose not to act; why?
• What patients can – and must – do to protect themselves
• Informed patients and consumer pressure can change what our system has failed to do
Public Needs to Know: You Could Become infected with HIV, Hepatitis C During Surgery

• HIV and hepatitis C commonly found in surgical patients; many of whom don’t know they are infected
• US surgeons and assistants are injured with needles, scalpels and other sharp object 1000 times a day, exposing them to blood of potentially infected patients
• As a result, surgeons may become infected with HIV and/or Hepatitis C – and not know it for months or years
• Infected surgeons can transmit HIV and/or Hepatitis C/B to healthy surgical patients during surgical procedures
• HIV and Hepatitis C can also be transmitted to healthy patients via contaminated instruments and devices, such as colonoscopes and dialysis equipment
Costs of 1000 Daily *Preventable* Sharp Object Injuries and Exposures to Blood

- Care providers and patients may become infected
- Anxiety, stress, shock, pain, suffering from an exposure (whether or not infection occurs)
- Blood testing can take up to 6 months to find out if you have been infected with HIV
- These sharp object injuries cost the healthcare system more than $1 billion annually for lab tests, medications, counseling and staff replacement
Almost Everyone Will be a Surgical Patient

• According to a recent study by the American College of Surgeons, the average American will have over 9 surgical procedures in a lifetime – not a question of if, but when.

• Potentially deadly surgical infections and errors are common

• You, the public, can prepare yourself with knowledge and become an empowered safety advocate for yourself or a loved one

• As a consumer of health care, you have the power to protect yourself. Will you use that power?
The OR: a Risky Place for the Patient and the Surgical Team

• HIV, hepatitis C & hepatitis B in one urban surgical practice = 38%
  (HIV 26%, HCV 35%, HIV+HCV 17%, HBV 4%)

• Surgeons usually fail to report their injuries, depriving themselves of the opportunity to receive post-exposure prophylaxis to prevent HIV and diagnose HCV early

• After a surgeon becomes infected, and subsequently is injured again, and his bleeding hand re-contacts that healthy patient’s internal tissues, that patient may become infected. This risk does not appear on surgical consent forms and is not discussed pre-op with patients
Known Reported Cases

• 1987 – 1989: Florida dentist infected with AIDS transmitted HIV to 5 patients
• 1999: French orthopedic surgeon infected with AIDS transmitted HIV to a patient during a hip replacement
• 2003: Obstetrician in Spain infected with AIDS transmitted HIV to a patient during a cesarean section
• 1991 -2005: worldwide, 11 surgeons infected with hepatitis C transmitted their infections to 38 patients, including 14 in the United States, and 12 surgeons infected with hepatitis B transmitted their infections to 91 patients, including 19 in the United States
• Tip of the iceberg ? What don’t we know?
Additional Reports of Exposures

• 2005 – 2015: In multiple reported exposure incidents, hundreds to thousands of patients were, or may have been, exposed to HIV and/or hepatitis C during colonoscopy, dialysis and major surgical procedures, due to improper cleaning and sterilization of equipment and sharps injuries to surgeons.
Most Exposures are *Preventable*; Therefore “Never Events”

- **Safety Devices** have been shown to prevent most sharp injuries and exposures to blood
- As required by federal law (*Needlestick Safety and Prevention Act* of 2000), employers (surgical/medical facilities) must provide for employees: safety designed injection needles / blood draw needles / IV catheters, safety scalpels* & blunt tipped (safety) suture needles*
- *Surgeons may choose not to use these if “in their opinion, they interfere with patient care”* (In most cases they don’t interfere, *yet only 5 to 10% of surgeons use them*)
Proof of Effectiveness of Safety Devices in Prevention of Injury and Blood Exposure

1. Blunt tipped suture needles
   CDC study: zero % needle-stick injury rate, compared to 6% rate with traditional sharp suture needles

2. American College of Surgeons (ACS) 2005 Bulletin - Statement on Blunt Suture Needles: “All published studies to date have demonstrated that the use of blunt suture needles can substantially reduce or eliminate needle-stick injuries from surgical needles. The ACS supports the universal adoption of blunt suture needles as the first choice for closing incisions (fascia & muscle)”. Similar endorsements by American Academy of Orthopaedic Surgeons, Association of Perioperative Registered Nurses (AORN), Association of Surgical Technologists, the Association of Surgical Physician Assistants, OSHA, and the FDA.

SURGEON COMPLIANCE: 5%
Blunt-tipped Suture Needle
Proof of Effectiveness of Safety Devices in Prevention of Injury and Blood Exposure 2

2. Passing sharp instruments using a “neutral zone”, instead of passing them hand-to-hand

½ of all scalpel injuries (the 2nd most common type of injury) and ¼ of all suture needle injuries (the most common type of injury) occur when these sharps are passed from hand-to-hand

Neutral Zone shown to reduce collisions & sharp object injuries significantly (Stringer B, et al)

SURGEON COMPLIANCE: sporadic
Neutral Zone (Hands-free Transfer Tray)
• **Double gloving** reduces risk of exposure to patient’s blood in multiple studies by as much as 87 percent

• ACS recommends the universal adoption of double gloving

• **SURGEON COMPLIANCE:** varies
4. Safety Scalpels

- Few studies, but intuitively and anecdotally helpful (Ten years of OB/Gyn practice)
- Do not interfere with patient care in most situations
- Resistance by surgeons: “They don’t feel the same” as the traditional (less safe) ones

**SURGEON COMPLIANCE:** 5% or less
Safety Scalpel

- Clear Protective Shield with Integrated Blade, Designed For:
  - One-handed activation, ease of use
  - Protection before and after use
  - Security and control during use

- Stainless Steel Blade

- Non-Slip Grip

- Top Button
  - Tactile sensation and audible click confirm lock

- Lock Indicator Line
  - Visual reference confirms lock

- Centimeter Scale

- Handle Size

- Stainless Steel Handle:
  - Conventional weight and feel
  - Tactile sensitivity
Missed Opportunities to Protect the Patient and Surgical Team

- Safety scalpels and blunt (safety) suture needles have been available for 2 decades; they can prevent a majority of the 1000 injuries that occur daily.

Why do only a minority of surgeons use them?

- Surgeons’ resistance to change
- Infrequent and sporadic enforcement of OSHA regulations (too few OSHA inspectors), few penalties
- Facility administrators and hospital executives don’t confront surgeons (lack of a strong culture of safety)

**THE ONLY SOLUTION LEFT: CONSUMER PRESSURE**
What Patients Need to Do: Find Transparency (learn about the risks); Apply Consumer Pressure

• **Speak up**, ask questions
• **Challenge** care providers to follow safe practices
• **Demand** safe care: *“In addition to washing your hands (It works; care providers are more likely to wash hands when they know patients are watching), I’d like you to use the following safety devices during my surgery:”*
• **Be your own safety advocate** - and bring another one with you for backup, to Dr’s office, hospital, surgery center or clinic to prevent deadly medical errors
• **Use safety checklists** of your own, because surgeons don’t always use them
Checklist (1 of 6): What You Must Ask a Surgeon the First Time You Meet*

• 1. Do you use blunt tipped suture needles to close your incisions?
• 2. Do you use a neutral zone for passing your sharps?
• 3. Do you double glove?
• 4. Do you and your OR team all use protective eyewear?
• 5. Do you use safety scalpels?

*Once you’re scheduled for surgery, it’s too late!
For Mutual Protection of Surgeon(s), other Care Providers and the Patient:

Surgeon agrees to use*:

• Blunt tipped suture needles for wound closure
• Double gloves
• Neutral Zone
• Safety Scalpels
• Appropriate PPE

* (except where could interfere with care)
A Hidden Risk of Surgery Revealed:

• The risk: exposure to HIV and hepatitis C in surgery
• It is mostly preventable
• Surgeons must change dangerous behavior but the healthcare system has failed to make that happen
• The only remaining solution: informed patients and consumer pressure
• Patients (i.e. the public – all of us will be patients) need to know what to ask
• Ask the right questions, speak up to protect yourself, your family member, and your surgeon! Your surgeon should, and hopefully will, say, “thank you”!
Prevent Exposure of Patients to HIV and Hepatitis C During Surgical Procedures!

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Preoperative Patient and Surgeon Mutual Protection Agreement

• Developed by a coalition of surgeons & safety advocates at HWUSA
• Protect patients from preventable harm
• Avoid exposure to bloodborne pathogens
• Improve Occupational Safety
• Protect surgical care providers from professional liability
Surgeon attests:

- Board certified and credentialed
- Will personally perform the surgery; if unable, permission will be obtained
- Present for Time Out & marking
- All alternatives have been discussed
- If medical device implanted, name, brand, serial number and manufacturer provided
- Divulge non-hospital employee to be present
If Sharps Injury with “re-contact”:

- Both the patient and the injured Care Provider will be tested for HIV, hepatitis C and hepatitis B, and other pathogens where appropriate
- Results will be given to the patient and the injured Care Provider
- Results shall remain privileged & confidential
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