I HEARD IT THROUGH THE STEAMLINE

Volume 28, Issue 2

President’s Message

Greetings,

This Association is committed to sharing information that will assist you in your professional career development and allow you an opportunity to network with your peers.

Quarterly meetings are held in Winston-Salem, North Carolina or at a vendor’s place of business. Please see the specific brochure for each meeting. The Education Committee is ready to hear your ideas and welcomes everyone’s input.

In April, 2017, we will hold our annual meeting at the beautiful Myrtle Beach Hilton in South Carolina. We invite all members from every state to join us. If you are not a member, we invite you to become one!

Lana L. Haecherl
NCAH CSP-President 2016

A Sweet Slice of Summer

Submitted By: ndbuckskin

A sweet slice of summer,
On a hot a afternoon,

The perfect treat to eat outside,
You don’t even need a spoon.

As you take a big old bite,
Feel the juice begin to run,

Be careful not to eat the seeds,
You spit those out, for fun!

A slice of watermelon,
Just can’t be beat,

It is the taste of summer,
Juicy and sweet!

Author: Patti Weigel
The Benefits and Challenges Surrounding Powered Surgical Devices
Katrina Simpson, M.A., CST, CSPDT

Objectives:
- Discuss various surgical procedures in which powered surgical devices are used
- Identify three power sources used to operate powered surgical devices
- Discuss challenges with reprocessing powered surgical devices
- Discuss procedures taken to reprocess powered surgical devices

What are powered surgical devices?

Powered surgical devices are complex medical instruments that are primarily used in orthopedic surgical procedures. These devices can also be used in other surgical specialty areas such as neurology, Otorhinolaryngology (ear, nose, and throat), dental procedures, and podiatry procedures in which the bone is typically dissected, drilled, reamed, or reconstructed. Some common powered surgical devices include saws, drills, dermatomes, and wire drivers. Utilizing powered surgical devices have demonstrated to decrease the surgical and recovery times for surgical patients. Surgical times are decreased due to the increased precision that powered surgical equipment provide to the surgical team which leads to less physical demand on the surgical team. Maintenance of sterility is one of the biggest advantages that cordless powered instruments have compared to their components. Cordless drills offer the surgical team an option to operate without electrical cords or nitrogen hoses that can help reduce the risk of contamination in the surgical field, furthermore, the surgical team's mobility as well as clutter is reduced (Snyder, 2009). Over the years powered equipment have been redesigned for efficiency and lighter density. As technology improves, powered instruments have become more ergonomic and surgical staff are able to use them more frequently without fatigue; their smaller structures also allow for easier management and sterilization (Bensen, 2015). Numerous facilities across the nation utilize powered surgical instruments daily. It is critical that the sterile processing technician is competent in their components and the ways in which to reprocess them.

What powered sources are used to operate powered drills?

Powered surgical devices typically operate from three major sources that include: battery, electric, and pneumatic. Cordless drills often utilize sterilized battery’s during a surgical procedure. These batteries’ must be charged before sterilization, although sterilization typically reduces the charge of the battery. The battery is often contained within the hand piece to produce power. Battery-powered drills are often used for procedures that require the operation of larger, denser bones such as total knee or hip procedures (IAHCSMM, 2016). Electrical powered sources contain cords that plug into power equipment that deliver a charge to the hand piece. Cords pose a risk of contamination in the operating room. Electrical powered sources also present several challenges in the central services department. Most cords can be sterilized according to manufacturer's instructions, but some cannot. It is important that the central processing technician consult with the manufacturer’s instructions before sterilizing.
Electrical powered equipment can also be operated by a foot control switch. The foot switch is plugged in the back of the electrical powered unit and the hand piece is operated when the surgeon presses down on the foot pedal. Pneumatic sources are operated by compressed air. These powered instruments receive their power once the hand piece is connected by a hose that hooks to a ceiling line, tank, wall outlet that contains compressed air or nitrogen. Surgical instruments such as sternum and sagittal saws as well as some drills are typically powered by pneumatic powered equipment (IAHCSMM, 2016). The hose and hand pieces for pneumatic powered equipment should be reprocessed and sterilized according to the manufacturer’s instructions.

**Decontaminating and reprocessing protocols for powered surgical devices**

Powered surgical equipment becomes heavily grossed with adipose tissue after the procedure because bone contains a lot of fat which can be found in bone marrow. Bone marrow is a tissue inside bones, packed with numerous cells and adipose tissue (fat); the production of these marrow cells and fat found in bones are dependent upon specific types of progenitor cells called a mesenchymal stem cell (Derewicz, 2014). There is a theory that the increase in fat within the bone contributes to the increased risk of fractures in the elderly.

Adipose on medical devices tend to feel very greasy, therefore, it is essential that the central processing technician use the appropriate enzymatic detergent to effectively clean the powered device. While cleaning and decontaminating powered instruments the device must be disassembled. Detachable components and devices such as collets, drills, wires, hoses and batteries must be removed to ensure adequate cleaning unless specified differently by the manufacturer. Many manufacturers do recommend that the cord is connected to the hand piece of the powered device to prevent fluid invasion that can contribute to damage of the powered
device during decontamination (IAHCSMM, 2016). Powered medical devices should not be immersed in any liquid or detergent when cleaning and decontaminating the instrument. Instead, the device should be hand washed according to the manufacturer’s instructions. Lubricants should not be used on powered equipment unless otherwise specified by the manufacturer. Pneumatic cords are often black in color which make them difficult to confirm cleanliness. These hoses must be carefully cleaned and inspected to ensure adequate decontamination. Attachments must be cleaned with brushes that are distributed through the lumen of the device. Working batteries should not be inserted when decontaminating battery-powered sources, instead a damaged or inoperable battery can be inserted to protect the components within the hand piece. The devices should be thoroughly cleaned and rinsed before utilizing the appropriate sterilization method. After proper decontamination, sterilization must take place. Steam sterilization is the most recommended sterilization process for powered surgical equipment.

**Challenges associated with powered surgical devices**

There are several challenges that can occur while handling powered surgical instruments. The central service technician must be thoroughly educated on the appropriate procedures in which they handle, clean, decontaminate, and sterilize powered surgical devices. Unfortunately, washer-decontaminators cannot be used to effectively decontaminate powered equipment due to the increase risk of damage to internal components and fluid invasion. Certain small lumens can present challenges during the cleaning process that make it difficult to verify satisfactory cleaning of the device. Steam, condensation, and fluid invasion can also contribute to corrosion of powered equipment, damaging the internal components (IAHCSMM, 2016). Powered surgical devices are very delicate and require special handling. It is important not to throw or bang these devices on surfaces that can damage them. They must be frequently inspected and serviced for preventative maintenance to ensure supreme operation.

Improper cleaning can contribute to patient harm or hospital acquired infections, therefore, it is critical to ensure that all components of the powered instruments are thoroughly cleaned and properly sterilized according to the manufacturer’s instructions. Cords and hoses must also be thoroughly inspected to ensure there are no cracks or frays that can contribute to electrical burns or shocks. Any damaged device should be immediately tagged and sent off for repair. Always remember that it is your duty to follow the appropriate procedures to ensure optimal patient care.

References


Tea’d Up: DIY Green Tea Exfoliator

Do you love long relaxing days at the spa, but can’t go as often as you’d like because you don’t have the time, or it’s simply not in the budget? Well, don’t worry folks, I got you covered! Here is a quick and simple recipe for a homemade green tea exfoliator and the benefits it contains to help you achieve healthier skin.

This scrub has many benefits that can help transform your skin if you use it on a regular basis. Exfoliation reduces blemishes and scars, defends the skin against sun damage, gets rid of dead skin and pollutants, and cleanses the pores. The mixture even has antioxidant properties that reactivated skin cells and fight against damaged skin.

Now you’re probably wondering, what’s in the exfoliator that gives the skin all these benefits? The secret is… all four ingredients!

These components are:

- 1 tbsp green tea (dried leaves)
- 2 tbsp of honey
- 1 cup white/brown sugar
- ½ cup of olive oil

How It Works

The polyphenols in green tea leaves neutralizes harmful free radicals, thus delaying signs of skin aging. The properties of these leaves can even fight the prevention of skin cancer if used regularly in your beauty regimen. As far as the other ingredients, the sugar contains glycolic acid, which helps cell turnover and enhances fresh looking skin. The olive oil contains three important antioxidants that also help the skin from aging prematurely. However, the powerhouse of nutrients in this mixture is the honey! It is filled with antioxidants that have natural enzymes that help cleanse and nourish the skin. Best of all, the honey can also prevent acne since it has antibacterial properties.

Directions

Once you mix all of the ingredients together, put the scrub in a container or a jar to keep it nice and fresh. To apply the exfoliator, use the product during your shower and scrub everywhere on the body making a circular motion. For desired effects, do so for at least two minutes or until the scrub has melted into your skin. The longer the exfoliator is on your skin, the better results you will have. After the product has marinated into your skin, rinse the scrub with warm water. When you are done, you will immediately feel the difference!

Jun 21, 2016
By Jacqueline Hill
www.blackdoctor.org
The Benefits and Challenges Surrounding Powered Surgical Devices
Post-Test 2016

1. Powered surgical devices are simple medical instruments that are easy to clean.
   - TRUE
   - FALSE

2. Cordless drills present several sterility concerns compared to pneumatic drills.
   - TRUE
   - FALSE

3. Advances in technology has enhanced the design of powered equipment by making them more ergonomic for the surgical staff.
   - TRUE
   - FALSE

4. The three sources of powered equipment are electric, battery, and compressed air.
   - TRUE
   - FALSE

5. Battery-powered drills are used often on total joint procedures.
   - TRUE
   - FALSE

6. Several manufacturers recommend that hoses are connected to the hand piece of a powered device to minimize or prevent the risk of fluid invasion during cleaning and decontamination procedures.
   - TRUE
   - FALSE

7. Powered surgical equipment cannot be used during otorhinolaryngology procedures.
   - TRUE
   - FALSE

8. Bone does not consist of fatty components.
   - TRUE
   - FALSE

9. Washer-decontaminators are the preferred method of decontaminating powered surgical devices.
   - TRUE
   - FALSE

10. Powered surgical devices that are improperly cleaned can contribute to patient infection.
    - TRUE
    - FALSE

To receive one CEU credit, complete the quiz and send this page only, via normal mail:
    Lana Haecherl
    P. O. Box 568
    Pineville, NC  28134-0568

Your certificate will be sent via email if your score is greater than 70%. If you are not a member of NCAHCSP, please include a fee of $20.00 along with your Membership Application, found on the website (www.ncahcsp.org). Please allow at least six weeks for processing.

CEU Expiration Date:       June 21, 2021

PRINT NAME CLEARLY: 

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□ (New e-mail address)
Summer Shrimp Salad

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**INGREDIENTS**

1. 1 pound frozen, fully cooked medium shrimp, thawed
2. 1 medium red onion, thinly sliced
3. 4 cups watermelon, roughly chopped
4. 2 jalapeños, seeded and finely chopped
5. 2 avocados, roughly chopped
6. juice of 1 lime
7. 1 teaspoon honey
8. 3 tablespoons olive oil
9. 3/4 teaspoon kosher salt
10. 1/4 teaspoon black pepper
11. 1/2 cup fresh cilantro leaves, roughly chopped

**DIRECTIONS**

1. In a large bowl, combine the shrimp, onion, watermelon, jalapeños, and avocado.
2. In a small bowl, whisk together the lime juice, honey, oil, salt, and pepper. Pour the vinaigrette over the salad; toss.

Sprinkle with the cilantro. Set aside for 10 minutes to allow the flavors to meld.

*By Frances Boswell*
Dear Steamie,

Everyone is making a big deal about something called CRE. What is it and what does it have to do with the way we process our ERCP Scopes?

Curious

Dear Curious,

CRE, which stands for Carbapenem-resistant Enterobacteriaceae, are a family of germs that are difficult to treat because they have high levels of resistance to antibiotics. CRE are an important emerging threat to public health, common Enterobacteriaceae include Klebsiella species and Escherichia coli (e-coli). While CRE in and of itself is a very scary bug, the problem posed with the ERCP (Duodenoscopes) is the complexity of the actual scope. This scope contains an elevator channel and can be very challenging to clean even when following manufacturer guidelines. Due to recent reported outbreaks that were linked to ERCP patients, scope manufacturers were mandated by the FDA to update their cleaning recommendations. Facilities have received and continue to receive updates to ensure proper infection control measures, FDA compliance, and CDC guidelines are followed to decrease the risk of any microbial transmission via ERCP scopes. Always seek the help of your infection preventionist to answer any questions you may have. Hope this helps

Steamie
Up Coming Education Meetings

Please make plans to join us August 19th for the 2016 NCAHCSP Summer meeting. The meeting will be held in beautiful Winston Salem, NC at the Hawthorne Inn and Conference Center. All the details are on our website www.ncahcsp.org. It’s packed with education and promises to be a great experience.

The Fall meeting will be held on November 4th in Winston-Salem NC, at the Hawthorne Inn and Conference Center.

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If you are interested in serving on a committee please contact Lana

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