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
How well do you know your TEE Probe?

Katrina Simpson, M.A., CST, CSPDT

Objectives:
- Define the term transesophageal echocardiography
- Discuss reasons why transesophageal echocardiography procedures may be needed
- Identify the clinical risks of using a contaminated TEE probe on patients
- Discuss challenges associated with the reprocessing of TEE probes and the reprocessing steps
- Discuss the various components of the TEE probe and its functions

Transesophageal Echocardiography

Transesophageal Echocardiography (TEE) probes are used in minimal invasive procedures to photograph images of the heart. TEE testing is done to diagnose several diseases and conditions of the cardiovascular system. The probe is utilized like an ultrasound probe by producing sound waves to produce images to a monitor of the muscles in the heart, upper chambers (atria), lower chambers (ventricles), blood vessels and valves, as well as the external portion of the heart (pericardium) (American Heart Association, 2015). During a procedure, the semi-critical device is passed down through the patient’s throat by way of the mouth until it is positioned in the esophagus. Endocarditis is a condition in which there is inflammation within the heart due to the presence of an infectious bacteria. This condition can cause adverse effects in a patient that include, but are not limited to systematic infections, heart failure, stroke and organ damage due to the infection breaking away and traveling to other parts of the body (Mayo Clinic Staff, 2014). TEE probes can be used intraoperatively to help treat endocarditis, which could significantly decrease the patient’s chances of withstanding any future cardiovascular medical concerns. TEE probes can help many practicing physicians with properly diagnosing conditions associated with the cardiovascular system that may create issues in other types of procedures such as neurological procedures. Identifying conditions such as venous air embolisms are critical for patients undergoing neurological surgical procedures; the identification of these life-threatening conditions may be determined pre-operatively with the use of a TEE probe (Choudhury, 2015). TEE probes offer many benefits to the surgical or non-surgical patient. It is necessary that the central sterile processing professional understands the structure, components, cleaning, decontamination, and high-level disinfection or sterilization processes of these devices.
Components of a TEE Probe

In order to understand how to appropriately clean, test, disinfect, or sterilize a TEE probe, the technician should be familiarized with the components and functions of the device. A TEE probe is a complex piece of equipment. The actual components of the TEE include an actual probe with attachments and machine that is used to display the images of the heart to the practicing physician. The TEE probe device has a distal tip, transducer lens, shaft (flexible), control-housing strain with transducer controls, a cable, connector strain relief, and a connector housing (Koninklijke, 2013). The distal tip of the probe should be carefully managed when cleaning because it is prone to damage. The control-housing strains contain the controls to the transducer which help to manipulate the distal tip of the TEE probe. The flexible shaft of the scope along with the distal tip is the component of the scope that is inserted into the patient’s mouth in order to enter the esophagus for adequate view of the heart. The connector housing is connected to the monitor component to facilitate the view of cardia images on the screen.

Steps in Reprocessing of a TEE Probe

TEE probes may present certain cleaning challenges because of their complex design. It is necessary for the sterile processing technician to become familiar with the instruction on reprocessing as outlined in the manufacturer's instruction. Following the manufacturer’s instructions is critical in order to prevent possible contamination from the scope to the patient. According to Koninklijke, 2013, the following steps are required below for the reprocessing of TEE transducers: (1) Before the TEE probe can be cleaned, it must be first disconnected from the system in which it is connected to in order to deliver images to the screen. The delicate, distal tip of the TEE probe and flexible shaft should be thoroughly cleaned with an approved enzymatic cleanser, mild soap, or cleaning wipe to remove residual debris.
(2) Distal tip and flexible shaft must be meticulously rinsed without exposing the handle, cable, connector, or steering mechanism of the probe to fluid to prevent damage of the device. (3) High-level disinfect or sterilize the TEE probe (distal tip and flexible shaft only) utilizing the appropriate sterilant or disinfectant by immersing the components as indicated in the manufacturer’s instructions. (4) After removing the probe from the sterilant or high-level disinfectant, make sure to thoroughly rinse it and physically inspect for residual bioburden. If any are present, repeat the cleaning and sterilization process again. (5) After proper disinfection or sterilization, allow the probe to dry and sanitize the steering mechanism with the handle with 70% isopropyl alcohol or any other approved cleanser. Utilize an approved disinfectant for the cable, strain relief, and connector components of the TEE probe. (6) Allow the reprocessed TEE probe the opportunity to air dry by hanging it on the appropriate mounting device. Ensure that the device is free from destruction to include: cracks, leakage of fluid, sharp edges, or splitting. The TEE probe must be removed from use and sent to the appropriate manufacturing company if damaged. TEE probes should not be sterilized using gas, steam, gamma-radiation, or any other heat-related sterilizing techniques.

Clinical risks associated with the use of TEE Probes
There have been risks associated with improperly cleaned TEE probes in the past.

To be more specific, outbreaks of Escherichia coli and Pseudomonas aeruginosa have been linked to hospital acquired infections of cardia surgical patients due to the use of damaged TEE probes. If a TEE probe is damaged, it is imperative that it is not used, the damaged components may prevent the disinfectant or sterilant from properly removing all potential microorganisms (Rutala & Weber, 2016). It is essential that the end user inspect the scope for damage. This is a duty not only of the sterile processing professional, but the surgical staff as well. Damaged or improperly processed TEE probes add to the issues or health care; they do not alleviate from them. Before attempting to reprocess or handle a transducer/probe, become familiar with the manufacturer’s instructions in order to prevent the spread of infection.
References


How well do you know your TEE Probe?
Post-Test 2016

1. TEE testing cannot be completed to diagnose diseases of the cardiovascular system.
   - TRUE  FALSE

2. The ultrasonic waves are not strong enough in TEE testing to view the ventricles of the heart.
   - TRUE  FALSE

3. Identifying a venous air embolism is necessary for a patient undergoing surgery affecting neurological anatomy.
   - TRUE  FALSE

4. The flexible shaft is too thick to be inserted into the patient’s mouth.
   - TRUE  FALSE

5. The distal tip of the TEE probe should be carefully managed to prevent damage.
   - TRUE  FALSE

6. The TEE probe’s distal tip and flexible shaft must be adequately rinsed after immersion of a high-level disinfectant or sterilant.
   - TRUE  FALSE

7. It is possible to have residual debris on the TEE probe after the initial high-level disinfection or sterilization. In this case, the item must be reprocessed.
   - TRUE  FALSE

8. The handle and cable of the TEE probe must be immersed in a high-level disinfectant.
   - TRUE  FALSE

9. It is acceptable to sterilize the TEE probe by using GAMMA radiation.
   - TRUE  FALSE

10. The TEE probe must be thoroughly inspected for damage before using it on a patient to prevent spread of 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: September 21, 2021

PRINT NAME CLEARLY:

E-MAIL ADDRESS: ________________________________  □ (New e-mail address)

PHONE NUMBER: ________________________________
Peanut Butter Balls

**Ingredients:**

1 16oz package confectioners sugar

2 sticks butter

1 1/3 cup creamy peanut butter

2 cups graham cracker crumbs

1 16oz package Chocolate chips (milk or semi chocolate, your choice)

1/3 block paraffin (optional)

**Directions:**

Mix sugar, butter, peanut butter and graham cracker crumbs.

Roll into ¾ to 1” balls. Refrigerate till formed.

Melt chocolate (with paraffin will make the final product more shiny)

Dip balls in chocolate and place on waxed paper to cool.
Dear Steamie,

I have heard a lot of conversation in our hospital about being more "LEAN"…can you explain a little about LEAN and how it can apply to SP?

Curious

Dear Curious,

When we hear the words "let's make an effort to be more LEAN" in our work environment, the first thing that may come to mind is a reduction in staff.

However, the LEAN concept is really all about improving workflow by standardization and identifying items that are non value added or waste.

One of the foundations in the LEAN concept that can be readily adopted by SP is the 5S Model:

**SORT**

Remove unnecessary items and dispose of them properly.

Make work easier by eliminating obstacles.

Reduce chances of being disturbed with unnecessary items.

Prevent accumulation of unnecessary items.

Evaluate necessary items with regard to cost or other factors.

Remove all parts or tools that are not in use.

Segregate unwanted material from the workplace.
SET IN ORDER
Arrange all necessary items so that they can be easily selected for use.
Prevent loss and waste of time by arranging work station in such a way that all equipment is close proximity.
Make it easy to find and pick up necessary items.
Make workflow smooth and easy.

SHINE
Clean your workplace completely.
Use cleaning as inspection
Prevent machinery and equipment deterioration.
Keep workplace safe and easy to work.
Keep workplace clean and pleasing to work in

STANDARDIZE
Standardize the best practices in the work area.
Maintain high standards in workplace organization at all times.
Maintain orderliness. Maintain everything in order and according to its standard.
Everything in its right place.
Every process has a standard

SUSTAIN
Also translates as "do without being told".
Perform regular audits.
Training is goal-oriented process. Its resulting feedback is necessary monthly.
Self discipline
Get all staff together for a discussion and see if you can apply some of these suggestions.
Up Coming Education Meetings

Please make plans to join us November 4th for the 2016 NCAHCSP Fall 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 Winter meeting will be held on February 3, 2017 in Greensboro NC, at the Northfield facility (please check brochure for details).
Committees for 2016 / 2017

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

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