

"Go With the Flow – Venipuncture & IVC Placement"

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Proceedings

The "Go With the Flow – Venipuncture & IVC Placement" workshop is designed to provide veterinary professionals with a comprehensive and practical approach to mastering venipuncture and intravenous catheter (IVC) placement. The focus of the workshop is to refine participants' existing skills while introducing them to advanced techniques, such as distal central line (DCL) and central line (CL) placements. These procedures are essential for various clinical scenarios, such as prolonged IV therapy, administering medications, and central venous pressure monitoring in critically ill patients. The combination of theoretical instruction with hands-on practice ensures that participants gain not only knowledge but also confidence in applying these techniques in a clinical setting.

Theoretical Foundations

The workshop begins with a review of the anatomy and physiology of the small animal circulatory system, focusing on the key veins commonly used for venipuncture and catheterization. Understanding the structure of veins such as the cephalic, jugular, and saphenous is critical to achieving precise and effective venous access, especially during stressful or emergency situations. This foundational knowledge allows veterinary professionals to make informed decisions when selecting veins for blood draws or catheter placement based on the patient's clinical condition and the procedure's requirements.

Importance of Asepsis

Asepsis plays a critical role in phlebotomy and catheterization procedures to minimize the risk of infection, which can lead to serious complications such as phlebitis, sepsis, and even death in severe cases. The workshop emphasizes proper aseptic techniques, including patient preparation, site cleaning, and the use of sterile equipment. Participants will learn how to implement these techniques to maintain a sterile environment throughout the procedure, ensuring the safety and well-being of their patients.

Practical Application

Following the theoretical component, the workshop shifts into practical training. Participants begin by practicing standard venipuncture techniques on specially designed vein models that mimic the tactile experience of accessing veins in live animals. These models include cephalic, saphenous, and jugular vein simulations, allowing participants to familiarize themselves with various venipuncture sites. The importance of precision, gentleness, and proper patient restraint will be emphasized, helping participants minimize patient discomfort while maximizing the chances of successful venous access.

Building upon these skills, participants will move on to learning and practicing IVC placement techniques. This portion of the workshop covers both the selection and insertion of peripheral intravenous catheters, as well as more advanced techniques for placing DCLs and CLs. Participants will work through patient scenarios that necessitate each type of catheterization, such as prolonged IV therapy, parenteral nutrition, or frequent blood sampling, and will be guided through the steps for placing and securing these catheters in both simple and complex cases.

Skill Reinforcement and Takeaway Tools

The hands-on experience gained during the workshop is designed to reinforce the participants' skill development in phlebotomy and catheterization. To ensure continuous improvement, each participant will receive a personal vein model to take home for ongoing practice. The workshop also emphasizes that regular, repeated practice is essential for mastering these skills, particularly in high-pressure situations.



Learning Objectives

1. Understand Basic Circulatory System Anatomy (Small Animal):

Participants will develop a solid understanding of small animal vascular anatomy, with an emphasis on veins commonly used for venipuncture and catheterization. This knowledge enables veterinary professionals to make informed decisions when selecting venipuncture sites and catheter placements, ensuring precision and patient safety.

2. Know Why Asepsis is Critical in Phlebotomy Procedures:

Attendees will learn about the importance of aseptic techniques to prevent infections during invasive procedures. The workshop will cover the correct methods for maintaining a sterile environment, which is critical to patient safety and the prevention of complications.

3. Learn Proper Technique for Blood Draws:

Through hands-on practice, participants will refine their venipuncture skills, focusing on proper needle handling, vein selection, and the importance of precision and gentleness. The goal is to ensure successful vein access with minimal discomfort to the patient.

4. Learn/Develop Standard IVC Placement Techniques:

Participants will gain proficiency in placing peripheral intravenous catheters (IVCs) by practicing on vein models. Instructors will provide detailed guidance on catheter selection, insertion, and securement, as well as routine catheter care.

5. Recognize Which Patients Would Require a DCL or CL and Why:

Veterinary professionals will learn to identify clinical scenarios where distal central lines (DCLs) or central lines (CLs) are necessary. This includes understanding the indications for each type of catheterization and how to implement them safely.

6. Practice Distal Central Line (DCL) and Central Line (CL) Placement:

Attendees will gain hands-on experience with advanced catheterization techniques, practicing the placement of DCLs and CLs using vein models and manikins. This training will focus on both the technical aspects of catheterization and the clinical reasoning behind its use.

Workstation Instructions and Methodology

Participants will rotate through various workstations, each focusing on specific aspects of venipuncture, standard IVC placement, and advanced IVC placement (DCL and CL). This structure ensures that every participant has ample opportunity to practice and refine their skills in a supportive and supervised environment.

Workstation 1: Venipuncture Practice

- Materials:
 - Vein models, syringes, needles, gloves, sharps containers, gauze, alcohol wipes, chlorhexidine solutions.
- Method:
 - Participants will practice standard venipuncture techniques on vein models designed to replicate cephalic, saphenous, and jugular veins. Proper patient preparation and aseptic techniques will be demonstrated and practiced. Instructors will provide personalized feedback, helping participants refine their needle handling, vein selection, and procedural accuracy.
- Goal:
 - Develop kinesthetic skills in venipuncture, focusing on gentle and accurate vein access to minimize patient discomfort and maximize success.



Workstation 2: Standard IVC Placement

- Materials:
 - IVC catheters, vein models, 1" white tape, gauze, alcohol wipes, chlorhexidine solution.
- Method:
 - Participants will be guided through the steps of selecting and placing peripheral intravenous catheters (IVCs) on vein models. They will practice patient and site preparation, catheter insertion, and securement, as well as the steps for routine catheter care.
- Goal:
 - Achieve proficiency in placing and securing peripheral intravenous catheters, ensuring proper technique for safe and effective catheterization.

Workstation 3: DCL and CL Placement Techniques

- Materials:
 - Central line (CL) kits (double/triple lumen), distal central line (DCL) kits, vein models.
- Method:
 - Participants will practice placing DCLs and CLs on vein models and manikins. Instructors will guide participants through the specific steps of placing central lines, highlighting the differences between peripheral and central catheterization.
- Goal:
 - Provide hands-on experience in advanced catheterization techniques, allowing participants to gain confidence in placing DCLs and CLs for more complex clinical cases.

Methodology Overview

The workshop is structured around interactive, hands-on learning. Instructors will actively demonstrate techniques and provide one-on-one guidance as participants rotate through each workstation. By the end of the workshop, participants will have received detailed instructional handouts and personal vein models, allowing them to continue practicing the techniques outside of the workshop setting.

References

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