Vet-Dop

Operating and Maintenance Instructions

Preparaion

1. Plug transducer into receptacle at back panel. Leave it plugged in when not in use. Do not pull on cable.

2. Set volume control at mid-range and turn on Doppler by pressing and releasing ON/OFF button. Do not hold button down. (Turn Doppler off by pressing and holding ON/OFF button down for one second. Plug in stereo headphones to bypass speaker if desired. (Speaker sounds may frighten animal)

Operation

1. Attach back of transducer to one of the Velcro straps provided. Place the transducer near the wide end of the strap for small limbs and closer to the center of the strap for larger limbs. You may also cut off the strap to form a handle should you want to hold the transducer while steadying the limb with the same hand.

2. Apply ultrasound gel and place transducer and proper cuff on limb per the procedure on reverse side. Do not use ECG paste or oil based substances.

3. After use, attach strap with transducer to Vet-Dop handle for protection.

Changing Batteries

Change batteries when LOW BATTERY light illuminates by removing cap on battery holder at side of Vet-Dop. Note polarity and replace with three fresh "C" cell ALKALINE batteries only. Batteries will last for over 50 hours of continuous Doppler operation.

Maintenance

Protect Vet-Dop from liquids. Clean with damp cloth (rubbing alcohol or water). CLEAN TRANSDUCER WITH RUNNING WATER AND SOFT TOOTHBRUSH. Transducer (not cable connector) may also be dipped in rubbing alcohol or water. Do not autoclave. Do not use hospital disinfectants. DO NOT USE ECG PASTE AS COUPLING MEDIA.

Service

Vmed

(800) 926-9622

Doppler Blood Pressure

Preparation

Doppler detects blood flow in arteries and veins. The radial, cranial tibial, and median coccygeal arteries are the most practical to monitor. Our preference is the cranial tibial artery because the hair clipping that is required is least noticeable. However, the other two arteries are acceptable and preferred by some. When the median tibial artery is used for cats, a 2-4 cm wide cuff is placed above the hock.

Stress is a significant factor that must be minimized to get meaningful blood pressure readings. Allow your patient a few minutes to rest in a quiet place not near other animals and preferably have the owner hold and reassure it for a few minutes. The presence of the owner is very helpful in relieving your patients stress. Take advantage of this if possible.

Procedure

1. Clip hair as short as possible at the palmar aspect of the foot just proximal to the metacarpal pad. Rub a small amount of ultrasound gel into the skin in the midline area where the palmar arterial arch is located. It can be palpated on large dogs and is actually just slightly medial to the midline.

2. Select an animal cuff with a width approximately equal to the width and up to 2X the width of the forearm, measured at the mid-radial region. Vmed blood pressure cuffs have a handy reference gauge to assist with proper cuff selection. Place the artery reference arrow printed on the cuff over the intended artery. Wrap the cuff around the limb. The reference arrow should fall within the circumference range marked on the cuff. Position the cuff proximal to the hock, proximal to the elbow, or at the base of the tail, depending on which artery is used. The cuff should be place with the line and arrow over the intended artery.

3. Apply a thin coat of gel to the skin and an ample ball of gel to the cup of the transducer.

4. Place probe over the artery and either hold it in place with thumb and fore finger or strap to the limb using a Velcro strap or surgical tape. Move the transducer slightly until the blood flow sounds are detected. Apply enough pressure to hold the signal but not so much as to occlude the artery.

5. Squeeze the bulb on the sphygmomanometer until the reading is approximately 20-30 mm Hg over the pressure where blood flow stops. Slowly deflate the cuff by squeezing the valve and mark the systolic pressure on the gauge when blood flow sounds resume. The first signal will be a shorter and choppier sound than the swishing sound heard before inflation.

6. Diastolic pressure can be estimated by carefully listening to the signal quality as the cuff continues to deflate toward zero pressure. When the characteristic "swishing" sound is again heard, this corresponds to a very small back flow of blood corresponding to the diastolic pressure. The dial on the pressure gauge will also sometimes oscillate at the diastolic pressure allowing for confirmation of the audio tone.