a new method for

BRACING CROPPED EARS and

COSMETIC REPAIR OF EARS

Since the surgical technique for cropping canine ears was developed, veterinarians have had to contend with insufficiently rigid ear cartilage. Over the years, the problem has been compounded by heredity because dog breeders have concentrated their attention on more highly publicized heritable problems such as eye defects, hip dysplasia, etc. Most breeders and dog owners seem to believe that their veterinarian should be responsible for making their dogs' ears stand, even though the ear cartilage is not sturdy enough to support the ear.

Most, if not all, methods for cropping or repairing ears have limitations. A dog can scratch off or shake off external ear braces. Sometimes when braces are used, infection develops because air is not allowed to circulate inside the ear to keep it dry. Bandages and sponge or foam pads irritate in the same way as braces and are also hard to keep in place. The various types of implants currently marketed can be shaken from the ear or rejected, or both. Buried sutures may become abscessed and/or they may break.

Regardless of what type of artificial support is given, failure to create a cosmetically acceptable ear means wasted time and money for both the client and the veterinarian. The dissatisfied client complains to other clients and the spca. The cry is then taken up for the abandonment of ear-cropping on the basis that the procedure inflicts unnecessary pain on the animal.

Considering some of the techniques that have been used to trim and repair ears, we have to agree that the anti-cropping forces have a valid point. The result is that more and more veterinarians are refusing to crop or repair canine ears and are referring these cases to other practitioners who will accept the responsibility.

In this paper I describe and illustrate (Figures 1-14)
a method I developed for cropping or repairing ears which ensures a properly standing ear without requiring the client to return the dog for repeated bracing of the ear. Central to this method is the use of a special instrument called Behney Implant Instrument (Dr. Jorgensen's Laboratories, 2080 W. 15th St., Loveland, Colorado 80537). This device consists of three parts: a trocar, a cannula, and a thrusting rod (Figure 1). Originally, the instrument was designed for preparing the ear to receive any type of implant. It can still be used in this way; however, a unique stainless steel, spring-type implant with wishbone configuration (Figure 2) has been designed to eliminate some of the problems encountered when other types of implants are used.

The primary purpose of the Behney Implant Instrument is to eliminate the cutting, which seems to predispose to hemorrhage and/or sepsis as sequellae. By blunt dissection, the device is used to create a tunnel between the skin on the inner surface of the ear and the cartilage. The only cutting involved is a ¼” lateral incision into which the cannula is introduced to make the tunnel. Because cutting is minimal, hemorrhage is negligible, thereby ensuring a surgical field that can more easily be kept aseptic—an important consideration in inserting any implant.

Another important aspect of this method is that the stainless steel, spring-type implant can be positioned in the ear in approximately five minutes. This is quite rapid compared to the time usually required for racking and taping ears.

Clients have found the described method especially satisfying since the dog leaves the clinic with its ears already erect and unbandaged and without the need of frequent additional attention. This is especially advantageous in practices in secluded areas, such as mine, where clients must drive many miles for veterinary service.

When the implants are properly placed, the dog neither shakes its head nor paws at its ears. The cut edges of the cropped ear heal by first intention. The ears are held tense and erect, allowing no folds or breaks to develop in the cartilage.

The method described here can also be used to correct ears that have a faulty stand. The only difference in
A 1-year-old Doberman Pinscher before corrective ear surgery on both ears. The remaining figures in this series illustrate the technique employing the Behney Implant Instrument to correct this dog's ears.

The ear has been draped, scrubbed, and prepared for aseptic surgery. A one-fourth-inch lateral incision has been made through the skin of the inner ear, down to the cartilage. Generally, this incision is made the same distance from the break in the cartilage to the feet of the implant. This is necessary for proper seating of the implant at the base of the ear. The incision is made in the anterior part of the ear (Figure 3). The trocar is then introduced into the incision and forced downward between the skin and cartilage, creating a tunnel. Just over the opening into the external ear canal, the direction of the trocar is diverted toward each side of the meatus and down toward the base of the ear.

Having been used to make the tunnel, the trocar is removed and the cannula is attached to it. The trocar, with the attached cannula, is reintroduced into the tunnel and the trocar is removed, leaving the cannula in the tunnel as seen here.
Figure 7
The depth of the tunnel is read on a scale on the side of the cannula to determine the proper size of the implant to be used. The stainless steel wire spring is then readied for implantation. Tension on the spring should be adjusted as necessary by spreading or compressing the legs before the device is implanted. Note the virtual absence of hemorrhage.

Figure 8 (right)
The feet of the steel spring have been brought together and the spring pushed, feet first, as far as possible into the cannula.

Figure 9 (far right)
The thrusting rod has been inserted into the cannula and used to push the spring all the way to the base of the ear. The cannula will be removed by sliding it upward on the thrusting rod.

BRACING CROPPED EARS (CONT'D)

technique is that the center bend in the implant is buried (Figure 11) rather than left exposed.

Removal of the implants is simple (Figures 13 & 14).

The implants have been used successfully to support uncropped ears, such as those of the German Shepherd dog. They have also been used to correct the stand of ears weakened by surgical drainage of hematomas. Therapeutic use of the implants has been made in cases of otitis externa, in which a small implant was inserted to hold the ear semi-erect so that air could circulate in the external canal.

To date, no adverse reactions to this method have been encountered except for one case of pressure necrosis caused by excessive tension and thickness of the wire in a spring being tested to determine the appropriate gauge and dimensions of implants for manufacture. Some practitioners have expressed surprise that no cases of aural hematoma have occurred. This can best be explained by the fact that cutting is minimal and thus subcutaneous hemorrhage is negligible.

The ability of ears corrected by this method to move normally is not restricted. Therefore, if only one ear has
Figures 10 & 11

The stainless steel spring is properly positioned in the ear (above, left). In freshly cropped ears, the top of the spring is left exposed as shown. One suture is placed in the center of the incision and another placed at the tip of the spring, holding the ear and the tip of the implant together. This is done to facilitate removal of the implant in two weeks when the ear-trim sutures are removed.

In cosmetic repair, a canal is made to accommodate the tip of the spring in the upper portion of the ear (above, right). The implant may not be removed for several months, if ever. It is important that if the fault is medial deviation of the ear, the tip of the spring be buried by passing through the cartilage and emerging under the skin on the medial side of the ear. If the fault is lateral deviation of the ear, the tip of the spring should be buried on the same side as the deviation. This ensures that the pressure exerted by the tip of the spring will always be against the cartilage and not the skin. The incision is sutured and the ears are checked for further deviation. If some deviation, medial or lateral, remains when the dog recovers from anesthesia, the fault is corrected by bending the spring inward or outward as necessary to compensate.
been treated, its movement will remain synchronized with that of the other ear.

When the method described here is used, the ears of a dog of any age can be trimmed without undue concern for cosmetic results. The stainless steel, spring-type implant stimulates fibrosis (and the formation of extra cartilage in young dogs) by acting as a foreign body. When the spring is removed, a channel of fibrotic tissue remains. This provides sufficient additional rigidity to ensure that the ear will remain erect.

Figure 12
The patient can be dismissed from the clinic on the same day the surgery is performed. The client should be instructed to watch for skin necrosis next to the tip of the spring. Should necrosis occur in that area, there is no problem; the spring can be left in the ear until fibrosis of the tunnel is complete, in about three to four weeks. Then the spring can be removed and the area at the tip of the spring will heal over very rapidly.

Figures 13 & 14
To remove the insert, the spring is cut in half at the bend in the upper tip and each half is removed. If the spring has been buried, as for correction of a faulty stand, a small amount of procaine is injected directly over the tip of the spring, a stab incision is made, and the spring is then cut in half. Dogs show no signs of discomfort during the removal of these inserts. In almost all cases, removal can be accomplished without sedating the patient.