

Preface

Domestic dogs have been selectively bred for millennia for various behaviors, sensory capabilities, and physical attributes. Modern dog breeds show more variation in size, appearance, and behavior than any other domestic animal. Nevertheless, their morphology is based on that of their wild wolf ancestors. Dogs are predators and scavengers, and like many other predatory mammals, the dog has powerful muscles, fused wrist bones, a cardiovascular system that supports both sprinting and endurance, and teeth for catching and tearing.

The goal of veterinary surgery may be quite different in pets and in farm animals. In the former, situation is a bit like in human beings, and more and more complex operations are performed, with sophisticated anesthesia techniques. In the latter, the cost of the surgical operation must not exceed the economic benefit in treating the illness.

Canine surgeries include: Soft-tissue surgery, Upper respiratory surgery, Sinus surgery, Oncology surgery, Ophthalmology surgery, Eye defect or eye injury repair, Reproductive surgery (Urogenital surgery, Cesarean section), Orthopedic surgery and Miscellaneous surgeries.

This text is concerned with surgical considerations of the canine species. The book includes a chapter that provides upto date information in anesthesia for practitioners in canines.

The topics of operations included the anatomical structures of the tissue or organ on operation and pharmacology of commonly used general and local anesthetic agents. Each of the operations mentioned in the book is described widely starting from the anatomical structure of the targeted tissue or organ followed by the techniques used to perform the surgery. Also the type of the anesthesia used is mentioned.

The specific surgical content is covered on the basis of body systems, with diagrams or photographs and illustrations.

The main purpose of the book is to point out the interest of canine surgery and the progress in the field of veterinary surgery and to clear its importance in the field of veterinary medicine. The book is concisely and clearly written and intended for veterinarians and clinicians directly involved in dog health and management. It could also be used by post and undergraduate veterinary students.

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Chapter 1

Surgical Instruments and Surgical Techniques

Surgical Instruments

Surgical instruments are offered by a large number of manufacturers. As they all compete for the same customers, advertisements usually include an attractive purchase price, which can be the result of compromised quality standards during manufacturing. Unfortunately, there are no international standards for instrument quality. As a result, caution must be exercised before purchasing instruments at bargain prices. When costs for replacement of prematurely worn-out instruments are combined with the frustrations encountered during surgery because of poorly functioning equipment, the higher costs of high-quality instruments are justified. On the other hand, some disposable instruments intended for human surgery can be used repeatedly by veterinary surgeons, which reduce costs considerably, anesthetic agents and regimens. The surgical technician becomes an extension of the veterinary surgeon and usually is more adept than the surgeon in the support areas.

An operating room supervisor is important regardless of the size of the facility. The supervisor is responsible for ordering and stocking all supplies, maintaining a surgery log, and recording all controlled substances and their use.

The dedicated surgical technician can fill this role.

Additionally, a surgical assistant is invaluable, and technicians with the proper basic training skills and attitude can be acceptably competent in a relatively short time with minimal training, rounding out the team to a perfect four.

Steel Scalpels

Scalpels are available with detachable blades, as disposable units with blades attached, and as reusable units with blades attached. In most clinics, the *Bard-Parker* scalpel handles with different detachable disposable blades are used. The Bard-Parker no. 3 scalpel handle is the most frequently used. Most surgeons prefer the no. 10 blade; the no. 15 blade is a smaller version in a similar shape. The no. 11 blade is frequently used for stab incisions during arthroscopic surgery, and the no. 12 blade is used for periosteal stripping. Two narrow blade handles, Bard-Parker no. 7 and no. 9 receive the same blades and are more appropriate for delicate work. The Bard-Parker no. 4 handle accepts larger blades.