New value-added service in animal practice

Since its introduction to veterinary medicine as a useful adjunct in the removal of unwanted cellular tissue, cryosurgery has in many ways surpassed the efficacy of alternative treatment modalities. Controlled cryosurgery is particularly suitable since intra and post-operative problems such haemorrhage, infection and suture removal are minimal to nonexistent.

It is for you that we have created the CryoProbe™.

This unique medical device brings innovative cryosurgical technology based upon the direct application of nitrous oxide on the lesion. The combination of a high-pressure jet with a constant low temperature of minus (-) 127°F offers unparalleled freezing power. With the CryoProbe® you will be able to remove unwanted cell tissue with great precision, accurate to the millimeter, thereby avoiding hazardous treatment of surrounding tissue. Treatment time is reduced to only a few seconds and little discomfort is experienced by the patient…

CryoProbe®



The CryoProbe® utilizes economical gas-efficient disposable cartridges. Packaging 10 x 8g

- **Freezing power** is of an intensity you have never seen before thanks to the direct expansion on the skin of N_2O gas under the high pressure of 725 psi from economical disposable cartridges. The constant flow of energy brings control and, together with the pressure used, optimizes the penetration in the lesion.

- **Sophisticated micro-applicator** technology enables unprecedented power and precision of treatment.

- **Treatment time** is reduced to only a few seconds, with excellent therapeutic results guaranteed. The instrument is compact, extremely user-friendly and very affordable.

- **Any time and anywhere**

The CryoProbe® will make it a reality



Use it…
You will be impressed!

To order call toll free
1-888-866-6736
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Practical cryosurgery for veterinary medicine

Cryosurgery is broadly defined as the controlled destruction of unwanted tissue by the precise application of extreme cold during clinical procedures. It may be used to effect the unselective but controlled destruction of living tissue, because normal and diseased cellular elements will not survive after being subjected to freezing to minus (-) 17°F.

Factors influencing successful cryosurgical application

• For effective cryosurgery, the rate of removal of heat from the tissues is more important than just the application of extremely low temperatures. Slow heat reduction causes a protective reaction of osmotic fluids flowing out of the cell leading to cell preservation instead of necrosis. Effective treatment requires rapid freeze: intracellular fluids freeze forming spiked shards of ice, which rupture the cell membrane destroying the cell.

• Virtually all biological tissues subjected to a temperature of minus (–) 17°F undergo cryonecrosis.
In more traditional cryosurgical treatments, such as the use of a cotton swab dipped in a refrigerant solution, the energy delivered is not sufficient to push the ice-ball to the caudal extent of the lesion. Since tissue is a poor thermal conductor, the forming layers of ice will hamper the ability of extreme temperatures to penetrate to the distal end of the lesion unless there is enough available freezing power.
In all cases a second freeze in the same treatment session will improve results dramatically.

• Cryosurgical treatment is very well tolerated by the patient. There is little to no discomfort in most cases, negating the requirement of anaesthesia.

Effect of Cryosurgical Application

Relative analgesia both during and after treatment results from the destruction of sensory nerve endings. Minimal or no haemorrhage occurs at the surgical site.

Following cryosurgery, edema develops within 30 minutes and usually lasts for 4 days. Aseptic necrosis of the treated tissue becomes apparent within 3 days and between the seventh and tenth postoperative day the slough is shed from superficial areas. Subsequent healing is by granulation and epithelization. Complete healing will occur in from three to six weeks.
Tissues are frozen in situ and thus no migration of cells occur. A serious disadvantage of conventional neoplasm excision is that handling frequently leads to the dissemination of metastatic cells through the lymphatic or venous drainage systems. A biopsy may be taken from a frozen block of tissue for histopathological examination without fear of precipitating metastases.

There is some evidence (Shulman, Yantorno and Bronson) that the products of the cryodestruction of tumor cells may enhance the ability of the patient to produce antibody against a neoplasm, such that the extent of destruction reaches beyond the areas initially frozen.

The CryoProbe® - New Microtechnology made available; Cryosurgery reinvented!

Cryosurgical capability is dependent upon and limited to the profile of the technical equipment available. Because of engineering advances and innovations in microtechnology, the rapid application of extreme cold has been made possible.

The CryoProbe® was designed utilizing this technology and offers the most advanced hand held cryosurgical instrumentation available today. This instrument relies on the Joule -Thompson principle of ejecting gas under pressure through a nozzle. In the past, transmission was indirect by passing the gas into a hollow metal probe and then applying the probe to the tissue. The CryoProbe® evaporates pressurized N_2O gas into liquid phase at minus (–) 127°F, which is then projected with direct precision on the lesion through very fine micro-applicators with a constant penetrating pressure of 725 psi from economical disposable cartridges.

Utilising this sophisticated microapplicator technology; the CryoProbe® is considered the most important development in cryosurgery in the last decade. Because of its ability to destroy tissues with pinpoint precision, accurate to the millimeter, the possibility of destroying normal healthy tissue adjacent to the lesion is minimized.

Indications for the use of Cryosurgery

The CryoProbe® is a compact, user-friendly, reliable and affordable cryosurgical instrument, which reduces treatment time to only a few seconds. There is wide application for its use in veterinary medicine:
Birds: Papillomatosis of the mouth, eyes, skin and cloaca*, uropygial tumors*, facial tumors*, tumors of the toes. **Reptiles**: Skin tumors, penile prolapse. **Ferrets**: Adrenal hyperplasia or neoplasia*, skin masses such as mast cell tumor, sebaceous gland adenoma and adenocarcinoma, cystic adenoma, fibroma and fibrosarcoma, hemangioma, neurofibroma, leiomyoma, histiocytoma, squamous cell or basal cell carcinoma. **Canine and feline**: Skin tumors, perianal adenomas*, perianal fistulas*, tarsal shield gland tumors, tumors of the mouth, gingival hyperplasia, eyelid tumors*, papillomas*, eosinophilic granuloma*. **Equine**: Skin tumors, sarcoids, eyelid tumors.

** Procedures where the use of the CryoProbe® might be preferred to other techniques. This of course depends on the location of the lesion and its size and the familiarity of the surgeon with the equipment.*

The versatile Cryosystem

The CryoProbe® is a product of close collaboration between H&O Equipments and leading members of medical profession. The result is a cryosystem of supreme technical performance combined with exceptional standards of flexibility, operating simplicity and safety.



CryoProbe®

Excellence in veterinary medecine...