Introduction

Prior to the construction of hospitals in the 18th and 19th centuries, many wounds healed without becoming infected, even when they were contaminated. However, when hospitals brought sick and injured people together in a small area, large numbers of pathogenic bacteria were concentrated in an area with many people susceptible to infection. Fatal infections became commonplace. The term used for this new phenomenon was “hospitalism”. Dr. Lister, an English surgeon, developed “antiseptic technique” to reduce the risk of infection in his patients. His rules are the basis of aseptic technique used today.

Like the human hospitals of today, the veterinary hospital or animal clinic is a gathering place for sick and well animals of varying ages and immune status. Large numbers of pathogenic bacteria and viruses can be shed from one animal and easily transmitted to another. The emergence of multi-drug resistant bacteria is also a concern. These are bacteria that antibiotics are no longer effective against. Disinfection of all areas where animals are housed, examination and treatment areas, surgical suites, and equipment used from one animal to the next is of paramount importance in preventing the spread of disease.

Common Disinfectants

Alcohol

Isopropyl alcohol (50 to 70 %) is an effective disinfectant for spot cleaning. It can corrode stainless steel.

Chlorine Compounds

The hypochlorite found in these chemicals is effective for cleaning large areas like countertops and floors. It is inactivated by organic debris, so the area must be cleaned initially, then disinfected. Hypochlorite can corrode metal.
**Iodine Compounds**

These chemicals stain fabric, light-colored surfaces and skin. Their use for disinfection should be limited to dark-colored floors and countertops.

**Preparing Instruments**

Instruments must be free of all blood, pus, feces, oil, and any other material before sterilization. It is difficult to remove surface contaminants once they have dried; therefore, it is helpful to soak contaminated instruments in a detergent-disinfectant solution until time is available for thorough cleaning.

This soaking process prevents the contaminants from drying and begins the cleaning process. However, instruments should not remain in a soaking solution for more than an hour. The longer the instruments remain wet, the greater the chances that non-stainless steel metals will corrode.

Effective methods of instrument cleaning include hand scrubbing to ultrasonic cleaning. When hand scrubbing an instrument, wear protective gloves and clinical attire covering all street clothing. Take care to minimize splattering, and perform hand scrubbing away from sterilized instruments. Rinse, dry, and polish the scrubbed instruments before packaging for sterilization.

When using an ultrasonic cleaner, fill it with the recommended cleaning solution only. Do not use disinfectants in place of ultrasonic cleaning solutions since the heat generated during the cleaning process may inactivate them.

**References**


**Questions**

1. Why are multi-drug resistant bacteria a concern in hospitals?
2. Why is it important to clean instruments or surfaces prior to disinfection or sterilization?
3. Why should instruments not soak in disinfectant for longer than 1 hour?
4. Describe two ways of cleaning instruments.