Instrument Care and Handling Proper care and handling techniques will help preserve the life of an instrument, and ensure that it functions at peak performance. First off, avoid having your instruments lay loose together. You should not combine delicate micro instruments with macro instruments as this may cause damage to the delicate tips. Most damage to instruments occurs during processing and cleaning, so it is crucial that you handle the instruments with great care. This is especially true for microsurgical instruments. Finally, we recommend you invest in a sturdy instrument container that is specifically designed for the storage and transport of microsurgical instruments. This helps tremendously in preserving the life of your instruments.

Important Most instrument damage occurs during processing and cleaning. The best way to avoid this is by handling them with great care. This is especially true for microsurgical instruments.

Pre-cleaning It is best to remove excess tissue or other residues from your instruments as soon as possible, ideally immediately after the procedure. This can be done manually or by an ultrasonic cleaner. We suggest that a disinfecting agent be used. Keep in mind that temperatures below 40° C are needed to avoid protein coagulation.

Make sure to move all approximators, ratchets and sliding parts to ensure that all residues are removed. Clamps, scissors and needle holders need to be opened to allow contact with cleaning solutions.

Cleaning In general, you should follow the prescribed guidelines established for your institution. It is recommended that cleaning and disinfecting be done in a thermal disinfector. Initial cleaning commences at temperatures of approximately 40-60° C with pH-neutral or alkaline cleaners (preferably with enzymatic agents). Rinsing is best done with cold water and without additives. Foam generation should be avoided as it may inhibit the cleaning action. You should follow the manufacturers' instructions regarding use of cleaning agents and cleaning equipment. Water used in all cleaning processes should have a low concentration of chloride ions, as excessive concentrations may lead to pitting and other forms of corrosion. Final rinsing should be done with distilled / deionized water. This helps to avoid staining of the instruments.

Important To avoid damaging the delicate tips of micro instruments, process them in their own designated tray. Avoid overloading the tray, making sure that micro instruments do not come in contact with macro instruments. Scissors and needleholders should be opened to ensure proper cleaning.

Be mindful of instruments with large surface areas. They can overshadow smaller instruments situated below them, thus inhibiting them from being cleaned properly and effectively. Instruments should be dried thoroughly after cleaning, to avoid corrosion.

Only clean instruments should be sterilized.

Important New instruments should be processed and sterilized prior to their first use.

Desinfection For the disinfecting process, we recommend using a cycle with the highest temperatures (usualy 80 - 95^o C).

Inspection Instruments should be inspected after each use and immediately after cleaning. Double check that the instruments are thoroughly clean, that the tips approximate well and that all scissors and needleholders are in proper working order. Pay special attention to hinges and box locks. Make sure that they are thoroughly cleaned and functioning smoothly. Check for bent and broken tips. Instruments that are damaged should be removed from service and either repaired or replaced.

Instruments that are beyond repair should be discarded, ensuring that they will not find their way back into the operating room.

If corrosion is apparent, the instrument should be removed from service and sent out for repair. Depending on the nature of the corrosion, some mild forms may be polished away. In the case of serious pitting or corrosion, the instrument should be discarded as to avoid cross contamination with other instruments.

Lubrication Instruments with moving parts perform best when properly lubricated. Instrument lubrication not only makes an instrument perform better, but also reduces the effects of corrosion, which ultimately prolongs the life of the instruments. We recommend any paraffin-based lubricant that is certified for use with medical devices. Remember to use only enough to wet the relevant areas, allowing instruments to drip dry before placing them in a tray or wrapping.

S&T instruments have a lifetime warranty on workmanship and materials. Instruments that are judged to be defective should be returned to S&T. Contact your local representative. When returning an instrument, supply as much of the following information as possible: Article code or catalog number; numerical code, located next to the CE mark; and description of the defect. This information is used to improve S&T instruments and ensure that our products remain state-of-the-art.

Packaging Packaging plays an important role in the sterility of your instruments. Note that corrosion may occur if there is wrongful handling during the packaging process, as the drying cycle in the sterilizer may be inhibited. Moreover, it is possible to invalidate the entire sterilization process if defective packaging materials do not properly protect the sterilized instruments.

Sterilization In general, you should follow your institution's set guidelines and procedures when sterilizing microsurgical instruments. The most common form of sterilization is steam autoclaving. Microsurgical instru-ments should be sterilized in their own case. We recommend autoclaving your S&T instruments in saturated steam, at a minimum of 132° - 134° C, for 3-18 minutes. Stained instruments are an indication of problems having to do with cleaning/sterilization processes relating to one or more of the following:

cleaning agents steam quality in sterilization water quality other agents Important Non-stainless or corroded instruments may damage other instruments during sterilization.

Storage Storage sites should be clean, dust-free and well ventilated. Environmental parameters such as temperature, humidity and radiation should be congruent with the standards for human habitation. Humidity must be below the dew point, at all times.

Use The life of an instrument may be extended if it is cleaned as often as possible during a procedure. Blood and other contaminates should be removed from the surface of the instrument before it is allowed to dry. This is best done with distilled water, not with saline or ringer solution.

Instruments that appear or become damaged during a procedure should be removed from use and marked for later evaluation, repair and/or replacement.

An influencing factor in an instrument's functionality is the transportation of the instrument between processing facilities, storage and use. We recommend the user evaluate methods and establish a system that is as simple and safe as possible.

From: https://neurosurgerywiki.com/wiki/ - Neurosurgery Wiki

Permanent link: https://neurosurgerywiki.com/wiki/doku.php?id=instrument_handling

Last update: 2024/06/07 02:52







instrument_handling