Objective

Discuss the effectiveness of different methods to remove the adhesives marks on surgical instruments. Properly choose the detergent and removal methods to reduce the rate of repeated cleaning and ensure the cleaning quality of surgical instruments.

Discussion

The alcohol is organic solvent and can dissolve the organics, inorganics and oil. Thus it can remove the adhesives marks.

The removal duration and effect of alcohol are inferior to adhesives remover and lubricant.

Alcohol dehydrates and denatures the proteins in bacteria, making it difficult to clean.

When the instruments are returned, those with adhesives marks should be pre-cleaned with organic solvents and then mechanically cleaned, which will improve the cleaning quality, shorten the cleaning time, improve work efficiency and protect the instruments.

Conclusions

Adhesives cleaner and lubricant both can effectively remove the adhesives marks.

Adhesives cleaner is faster in removal and more effective. But it is more expensive and cannot be frequently used.

Lubricant takes longer time to remove the adhesives compared with adhesives cleaner. But it is easier to clean and prevents rusts and protects the instruments.

Material

Surgical instruments with adhesives marks after use, adhesives cleaner, lubricant, 75% alcohol

Method

Manually removed the adhesives marks separately by adhesives cleaner, lubricant and 75% alcohol. Then loaded the instruments in the automatic washer-disinfector using the same cleaning procedures and water quality.

Discussion

The adhesives residues are mainly high polymers, which can be effectively removed by essential balm, turpentine and paraffin oil.

The paraffin oil and turpentine have nonpolar molecules which are insoluble in water, increasing the difficulty for subsequent cleaning.

Lubricant is compatible with human body. It is non-toxic, non-corrosive and facilitates the subsequent cleaning.