Silicone and Latex

- A latex catheter becomes obstructed faster than a silicone catheter\(^1\)
- Silicone is a biocompatible material
- There are no known allergies to silicone
Latex and silicone are the 2 main basic materials used to manufacture catheters.
- Silicone is a mixture of sand and water and is generally present as all silicone.
- Latex is a product that comes from the sap of the rubber tree. This latex is available in three forms: Ordinary latex, siliconised latex (vaporisation of silicone oil) and coated latex (latex covered with a silicone, PTFE or hydrogel coating several microns thick).

Siliconising and coating latex (whatever the coating used) do not protect the organism against the disadvantages of latex. All the risks of side-effects, inflammation and allergy due to the proteins in latex, associated with latex remain.

The reasons why Coloplast chooses silicone are as follows
- A latex catheter becomes obstructed faster than a silicone catheter
- Latex causes allergic reactions. Various epidemiological studies note an increase in the sensitivity of the world population to latex. The frequency of allergies to latex is between 1% and 4%, increasing to 10% for hospital staff. There are no known allergies to silicone.
- Silicone is a biocompatible material that is used and has been validated for the long-term implantation of a large number of different types of prostheses (cardiac stimulation catheters, artificial sphincters, long-term ureteral stents etc).

All the clinical studies comparing latex to silicone catheters confirm the benefits of silicone, with a reduction in allergies, urethral inflammation, infections and encrustations.

Silicone is a material which requires manipulations in accordance with its specific characteristics.

Recommendations for improving your use of silicone catheters
- Use a water-based lubricant.
  Do not use petroleum-based lubricants such as Vaseline and silicone-oil-based lubricants since they will change the mechanical properties of the silicone balloon and can cause it to burst or deflate.
- Preferably inflate the balloon using sterile water.
  Never fill the balloon with a saline solution upon insertion. Using a solution rich in electrolytes can lead to the formation of salt crystals that block the balloon’s inflation channel. Any solution that precipitates or crystallises could prevent the balloon from being deflated.

Tips for improved deflation of the balloon
- Leave (or reinject) 1 ml of liquid during ablation of the catheter. A little dosage of this liquid prevents crease formation thus reducing trauma when removing the catheter out of the patient.
- Proceed slowly if you are using a syringe to deflate the balloon. Aspiration that is too rapid or too violent could cause the balloon’s inflation channel to collapse. It could also cause the silicone balloon to become creased. Any remaining creases could cause pain during extraction of the catheter.

Generally speaking, the longer a balloon has been inflated, the more advisable it becomes to deflate it slowly. The ideal solution is to do so in two stages, removing half the volume of liquid in the balloon on day 1, and withdrawing the catheter after having withdrawn the rest of the liquid on day 2. This two-stage deflation allows the balloon to flatten on the body of the catheter and thus prevents a roll from being formed.

Bibliography

Reprinted in Denmark by Forno & Co. U.5000207

Your local distributor:

Coloplast
Holtedam 1
DK-3050 Humlebæk
Denmark

www.export.coloplast.com