SUMMARY

Hysteroscopy is considered one of the valuable techniques for both diagnostic and therapeutic purposes. Operative hysteroscopy represents a major advance in gynecologic surgery. Despite recent development in endoscopic equipment. The hysteroscopist still faces many challenges. Foremost among these is the appropriate choice and safe use of the uterine distension medium.

The most commonly used media are carbon dioxide gas, low viscosity fluids (e.g., glycine 1.5%, dextrose 5%, normal saline 0.9%), and high viscosity fluids (e.g., Hyskon, dextrose 25%). Sorbitol 5% and mannitol 5% are low viscosity fluid media but they are rarely used.

For diagnostic hysteroscopy, CO2 is usually used; for extensive operative procedures involving electrosurgery, glycine 1.5%,sorbitol or dextrose are used.

The difficulties encountered with low viscosity fluids (glycine 1.5%) are somewhat different from those of high viscosity fluids (Hyskon). With low viscosity fluids, one may encounter fluids overload, and hyponatremia. Acute hyponatremia is a serious problem that mustbe recognized early and adequately treated.

Glycine 1.5% is a low viscosity fluid medium. It is a non-electrolyte solution that permits the use of high frequency current for operative hysteroscopic procedures.it is metabolized into ammonia, serine, and oxalate. Serveral cases of hyperammonemia with

encephalopathic manifestations have been observed after the use of glycine with visual disturbances and muscle weakness. Intravascular absorption of glycine 1.5% may lead to water intoxication, hemodilution, hyponatrema, encephalopathy, seizures and gastrointestinal disturbances.

Sorbitol 5% has a short half life of 35 minutes, but it causes toffee-like deposits on the electrode and this makes the resection technically difficult.

Mannitol 5% causes an osmostic diuresis which can be beneficial in helping to decrease the side effects of intravasation. As with other low viscosity fluid media, intravasation of sorbitol or mannitol can results in hemodilution and hyponatremia with all associated sequelae.

Normal saline should not be used if electrosurgery is contemplated. It is isotonic and optically clear, but it may lead to fluid overload and pulmonary edema if absorbed in large amounts.

The toxic effects of dextran absorption involve intravascular fluid overload secondary to a hyperoncotic state. Anaphylactic reactions, non-cardiogenic pulmonary edema, and coagulation disorders have al been reported with the use of dextran.

Dextrose 25%is a hgh viscosity medium, available and inexpensive has a good optical qualities, electrolyte free, non conductive and mixes less readily with blood than does other solutions. Intravasation of dextrose 25% causes severe hyperglycemia and osmotic diuresis.

Carbon dioxide gas may be used for distension during diagnostic hysteroscopy, but although excellent vision is provided, it can not be used

Because fluid overload is the major complication relating to the uterine distension, all personnel in the operating room should be aware of the problem, all the precautions must be undertaken both preoperatively and intraoperatvely, and fluid balance should be strictly monitored. Excessive, rapid correction of severe hypontremia may cause cerebral demyelination lesions.

Various types of anesthesia have been used for hysteroscopic procedures, but there is not controlled studies comparing different techniques of anesthesia.

Administration of local anesthesia is simple, the cost is reasonable, the equipment required is minimal, the need for postoperative care is lessened and the undesirable effects of general anesthesia are avoided.

General anesthesia with a cuffed endotracheal tube is used if hysteroscopy is performed concomitantly with laparoscopy.

Regional anesthesia may be advantageous in terms of rapid recognition of symptoms associated with dilutional hyponatremia which occur progressively from restlessness, agitation, nausea, vomiting to visual changes and headache, so that pulmonary edema is prevented before frothy sputum is seen in the endotracheal tube.

As fluid overload with dilutional hyponatremia is a serious conditions, intraoperative monitoring is highly important. The routine monitoring should include blood pressure, ECG, capnometry and pulse oximetry. It will be helpful to monitor the electrolytes if the procedure