QUARTER 3
JULY - SEPTEMBER 2005

GYTECH QUARTERLY

Preventing Fluid Overload

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Fluid overload in the acute surgical setting is a complex issue. The key elements are 1. increase of extracellular volume per se and 2. change in the osmolality of serum and electrolyte homeostasis. There are two situations in which acute fluid overload presents a problem: resuscitation of the patient with acute blood loss and use of large volumes of irrigation fluid in body cavities. This article will review fluid overload due to irrigation fluid.

The cardinal symptoms of fluid overload are pulmonary edema, consequent to the volume increase and nausea resulting from hyponatremia. It is the latter symptom that is commonly overlooked and ascribed to a side effect of anaesthetic drugs. Every hysteroscopic surgeon should suspect fluid overload in a patient presenting with nausea and vomiting in the immediate postoperative period, especially if the symptoms are increasing and apparently resistant to the usual anti-emetics.

Monitoring of fluid overload is best achieved with serial Na+ measurements in serum.

There is one important caveat; in acute fluid overload, when fluid is put in at one entry point, it will take up to two hours for the fluid to completely mix with the extracellular compartment of the patient.

Therefore, a Na+ value taken at the end of hysteroscopic procedure is in general greater than the value which would be measured two hours later.

Caution required that low or near normal values of Na+ be checked after two hours to make sure the Na+ does not continue to drop. The best fluid overload treatment is prevention– no doubt about that. The absolute key to fluid overload prevention is real time information about inflow and outflow or the sum of both.

There are several surgical devices which will measure the fluid and the balance of inflow and outflow. Such a device is a great asset for the hysteroscopist. However, these devices can not deliver accurate measurements unless all fluid which returns from the patient is actually recuperated.

The prerequisite to adequate capture of all return fluid resides primarily in how the patient is draped prior to the procedure.

The surgical field should be widely disinfected, so that drapes which have a tendency to function as a wick, are far away from the perineum.

The popular and widely used ‘fenestrated’ drape is simply unsuitable for operative hysteroscopy.

Prior to covering the legs and the patient’s abdomen, it is recommended to place a specifically designed plastic funnel underneath the patient’s buttocks. Funnel drapes which are glued onto the perineum rarely stick long enough to complete the procedure and are ineffective.

Ideally both the drape and the resectoscope are connected to the collection canister for measurement of fluid balance. Alternatively, the resectoscope’s outflow is diverted into the funnel drape.

Such a set up, including the funnel drape represent a said basic system onto which an appropriate method for fluid monitoring can be built.

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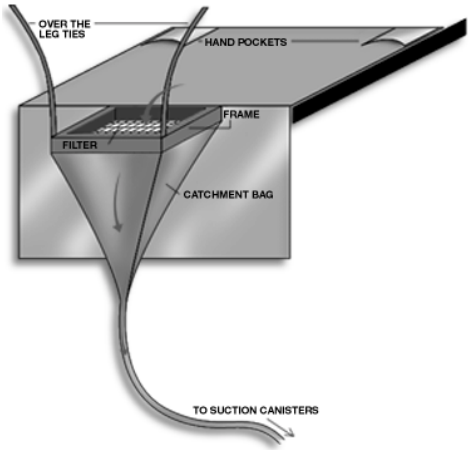
Featured Product

UNDER BUTTOCK DRAPE



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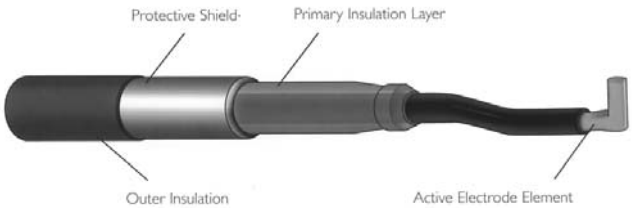

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