

New "ouchless" IVs less stress for children

Practitioners in U.S. hospitals place more than 25 million intravenous (IV) catheters a year. Ouch!

In some cases, particularly when it comes to children suffering from dehydration due to a flu or stomach virus, when it can often take multiple "sticks" to successfully place an IV in a vein, this can be an extremely unpleasant experience for child and parent.

Now, however, at Jersey City Medical Center and a relative handful of other hospitals around the country, Emergency Department doctors and nurses are rehydrating sick children by administering fluids subcutaneously (under the skin) with the use of Hylenex, the first and only human recombinant approved by the Food & Drug Administration for infants and young children with mild to moderate dehydration.

Hylenex is a purified preparation of the enzyme hyaluronidase, which breaks down hyaluronic acid, a space-filling gel that exists in the subcutaneous tissue. Hylenex temporarily makes the



MEDICAL UPDATES
from the Jersey City Medical Center

tissue beneath the skin more permeable (capable of being passed through) and able to absorb fluid, thus allowing fluids to be more readily absorbed into the blood vessels.

"For many children, the worst part of the hospital experience is the placement of the IV," said Dr. Michael Bessette, Director of the Emergency Department at Jersey City Medical Center.

"Even with the most skilled emergency professionals, it can mean several unsuccessful attempts, which ends in screaming children, anguished parents and a team of doctors and nurses needed to hold the child down in order to insert the IV. In addition to the emotional trauma, it often means

losing valuable time in hydrating the patient."

With Hylenex, while the parent hugs the child, an ER doctor or nurse places a catheter in the child's upper back – a part of the body where they are less likely to feel pain and there is little likelihood of the child trying to pull it out – without the need to secure a vein for treatment initiation.

The process of placing the catheter and injecting the fluid takes only a couple of minutes, whereas it takes an average of 45 minutes with the use of an IV. Hydration is normally completed within about three hours, as opposed to five hours with an IV. Should an IV later be needed to administer medication to the patient, it will be easier to place after the patient is hydrated.

ABOUT DEHYDRATION

Dehydration can occur in anyone at any age, but is of special concern when it affects infants and children. In children, dehydration usually occurs as the result of an illness which causes



the loss of more fluids than are being taken in (such as in the case of vomiting and/or diarrhea). Acute gastroenteritis, which leads to 1.5 million outpatient visits and 200,000 hospitalizations annually, is a common problem, but it can also be due to the seasonal or H1N1 flu.

A delay in treatment can possibly lead to a greater degree of dehydration. Typical signs of dehydration include a child who is tired, restless and irritable; increasingly thirsty; has a dry mouth and tongue, and/or has slightly sunken eyes. Since these children

usually can't keep anything down, and so taking fluids orally is not an option, the use of IV was the only choice until now. At Jersey City Medical Center, which began using Hylenex in October, children as young as a month-old have been treated with the enzyme.

"Hylenex avoids the pain and distress of multiple needle sticks, which benefits children and their parents," said Dr. Bessette. "It also allows for quicker treatment and turnaround time, which means patients will feel better sooner and can be discharged more quickly from the E.R."