

TRENDS & TECHNOLOGY

Steerable Bougie



Bougies are typically used to guide the tubes. This can eat up a lot of time while the patient is apneic. Now a team from Nottingham Trent University in England has built around a Flexinol (nitinol) tip, a memory alloy that can quickly snap between different shapes when heat is applied. There are two

Flexinol wires within the bougie with wires leading up to them. When a current is applied to one of them, the entire instrument flexes in its direction nearly immediately. This is done using a simple external controller and one person is able to guide the bougie down the windpipe. It will help prevent unnecessary brain damage or even deaths arising from difficult placement of endotracheal tubes.

<http://www.ntu.ac.uk/apps/news/167838-15/New>

Single-Use Ambulatory Infusion Pump

Zyno Medical's (Natick, MA) Nimbus ambulatory infusion pump offers both continuous rate and patient-controlled analgesia (PCA) infusions and was designed for intuitive programming by clinicians and easy use by patients.

It's being marketed as a low-cost solution because it's designed for single patient use and doesn't require purchasing new cassettes, changing batteries, or cleaning.

<http://www.zynomed.com/products/ambulatory-infusion-system/>



DCI-mini Hemoglobin Spot-Check Sensor



The rainbow DCI-mini non-invasive hemoglobin (SpHb) sensor is intended for infants and small kids weighing 3 to 30 kg (6.6 lbs to 66 lbs), the sensor connects to Masimo's Pronto monitor that displays the readings. The DCI-mini is clipped onto a child's finger, or a toe on smaller kids, and provides spot-check readings at any time. <http://masimo.com/news/index.cfm#3594>

Bier Nerve Blocks Using Nanoparticles and Magnets? Nanoparticles that target specific spots in the body have usually been developed for oncologists to attack tumors.



A team of researchers at University of Pittsburgh School of Medicine wanted to see whether nanoparticles ferrying local anesthetics could be effective in perioperative anesthesia and analgesia. Specifically, they evaluated whether a nanoparticle-delivered peripheral nerve block exhibits any benefits over traditional blocks.

The scientists created nanoparticles that contained magnetite, a ferrous mineral, coupled to ropivacaine, a commonly used local anesthetic. In a manner resembling the Bier block, the particles were injected via IV into lab mice and a magnet was placed by the ankles to concentrate the material in the area. Though the intravascular injection contained 14 times more ropivacaine than a standard ankle block given to control mice, the local anesthetic effect was comparable, but without creating side effects that would normally occur at such high doses.

<http://www.newswise.com/articles/nano-anesthesia-a-new-approach-to-local-anesthesia>

Proportional Assist Ventilation Plus Tech

Covidien's Puritan Bennett 980 Ventilator for use with neonatal patients, children, and adults features Proportional Assist Ventilation Plus (PAV+) technology licensed from University of Manitoba in Canada that provides smarter pumping to optimally synchronize with every patient. This will hopefully allow many patients to get off the ventilator earlier.

http://solutionscontent.covidien.com/uploads/11/11221-COVR5039_PB980_ProductTour_R13b_010714-1389889283-c.mp4



ViScope MD Stethoscope with Visual Capabilities



HD Medical, a Sunnyvale, CA firm, recently unveiled its ViScope MD digital stethoscope that works like a traditional stethoscope, but also displays the

phonocardiogram of the recorded sounds. It also features a murmur indicator.

The device interfaces with PC computers for saving and sharing of recorded auscultations and can support external audio systems for teaching situations.

<http://hdmedicalgroup.com/our-products/viscope-md/>