

Article by Dr. Anderson focuses on Group A Strep infection in pregnancy

PROVIDENCE – **BRENNA ANDERSON, MD**, director of the Women's Infectious Diseases Consultative Service at Women & Infants Hospital has published an article as part of a Clinical Expert Series in the April 2014 edition of *Obstetrics & Gynecology*, entitled "Puerperal Group A Streptococcal (GAS) Infection: Beyond Semmelweis," which offers a description of the recommended approach to diagnosing and treating GAS in pregnant and postpartum women.



Brenna Anderson, MD

"Basically, GAS is the same organism that causes strep throat. But when the infection occurs in the uterus, it can be life threatening," said Dr. Anderson. "This is a very unusual but serious infection, and recognition of it is often a stumbling block to treatment."

Group A streptococcus (GAS) can cause invasive infections in the form of endometritis, necrotizing fasciitis, or streptococcal toxic shock syndrome. These infections, when associated with sepsis, have associated mortality rates of 30 to 50 percent. When a pregnant woman presents with GAS infection, her symptoms are often atypical, with extremes of temperature, unusual and vague pain, and pain in the extremities. Imaging may appear normal, but removing a small sample from the uterus along with a blood culture may be a useful, rapid diagnostic tool.

"When suspected, invasive GAS infections need to be treated quickly. Very specific antibiotics are often helpful, although the infection may require surgery, which can be lifesaving," Dr. Anderson explained. ❖

Dr. Dudley's research investigates cancer drug to lower risk of sudden cardiac death

PROVIDENCE – **SAMUEL C. DUDLEY, MD, PhD**, a researcher at the Cardiovascular Institute (CVI) at Rhode Island, The Miriam and Newport hospitals has found that a new class of drugs, originally developed to treat cancer, reduces sudden cardiac death risk after a heart attack. The findings were published online in advance of print in the *Journal of the American College of Cardiology*.



"Currently, there are limited options to reduce sudden cardiac death following a heart attack," said Dr. Dudley, principal investigator and chief of cardiology at the CVI. "The benefit of most drugs is limited, and they have additional side effects. Defibrillators are an option, but they cannot be safely implanted for 40 days following a heart attack.

This finding gives us hope for a new treatment model, and if approved, will provide physicians with new options to lower patients' risk of death from cardiac arrest."

In this study, researchers evaluated mice that had sustained a heart attack and also had abnormal heartbeats. The study found that inhibition of a protein signal known as c-Src decreased the risk of abnormal heartbeats and sudden cardiac death. This suggests usefulness of c-Src inhibition in preventing arrhythmias associated with heart failure. This use of Src inhibitors for treatment of sudden cardiac death risk has been submitted for a patent.

"More research is needed to evaluate the efficacy of this use of a cancer medication to alleviate risk of sudden cardiac death, but we are hopeful that what we observed in mice will translate effectively to humans, providing patients and clinicians with a new paradigm for treating this common and life-threatening illness," Dr. Dudley said. ❖

Bradley Hasbro Children's Research Center receives \$3.4M grant to study risk behaviors of juvenile offenders

PROVIDENCE – **MARINA TOLOU-SHAMS, PHD**, a psychologist from the Bradley Hasbro Children's Research Center, has received a \$3.4 million grant to study the behavioral health and associated risk factors of adolescent offenders in the Rhode Island Family Court system. The study, funded by the National Institute on Drug Abuse, will focus on non-incarcerated, court-involved youth, and will monitor what risk behaviors the teens may develop, as well as the underlying causes.

The study will follow 400 Rhode Island Family Court-involved youth between the ages of 13 to 17, and their caregivers. Tolou-Shams' team will

monitor the development of drug use, HIV/STD risk behaviors, psychiatric symptoms and recidivism in the adolescent offender population in the two years after the initial arrest or court contact.

The likelihood of acquiring HIV/STDs is also substantially increased among court-involved youth. Studies of juvenile detainees with both substance use and psychiatric concerns show that most are sexually active and more than half have had multiple partners and unprotected sex.

"There has been an emphasis on moving away from juvenile confinement and instead developing prevention

and treatment programs for juvenile offenders in the community. Yet, only a handful of studies have examined these behaviors among non-detained juvenile offenders, who represent 80 percent of all legally involved youth," said Tolou-Shams.

Tolou-Shams, who is also director of the Rhode Island Family Court Mental Health Clinic, hopes that the findings from this study will help to develop recommendations on how the court system can better support first-time young offenders to keep more teens from repeating offenses.