

## GRAND ROUNDS

Dec. 5

### Multiple Endocrine

#### Neoplasia Type 2 in Children: Current and Future Management

Michael Skinner, M.D., Edwin Ide  
Smith M.D., Professor of Pediatric  
Surgery, Children's Medical Center.

Dec. 12

#### We can't do it all: What really works in well child care?

Virginia Moyer, M.D., Professor of  
Pediatrics, Baylor College of  
Medicine.

*Also available via videoconference at selected  
area hospitals, call 214-345-2330 for locations.*

## MEDICAL UPDATE: Type 1 Diabetes

Sometimes lost in the avalanche of publicity regarding the epidemic of obesity and type 2 diabetes in children is the fact that the incidence of type 1 diabetes is on the rise across the world as well, for less well established reasons. Although advances in diabetes care allow children to lead active lifestyles with minimal restrictions, there remains significant ongoing interest in research aimed at the cure or prevention of type 1 diabetes.

The root cause of type 1 diabetes remains the loss of beta cell function largely due to an autoimmune process. At the time of diagnosis of diabetes, a child has typically lost 70-90 percent of their healthy insulin secretory capacity. Persistent beta cell function in patients with even long-standing diabetes has been associated with fewer complications of disease and improved outcomes. This realization has sparked a great deal of interest in characterization of the factors that are associated with beta cell loss, and newer therapies aimed at the preservation of beta cell function in children with type 1 diabetes.

Studies aimed at improving beta cell lifespan are putting a new twist on routine type 1 diabetes management at Children's Medical Center.

For example, physicians at the hospital are part of a collaborative effort investigating the utility of newer immunomodulatory therapies such as monoclonal antibodies targeting specific elements of the immune system. Earlier work has shown that the targeted elimination of CD3+ T cells in a population of newly diagnosed diabetics stemmed the immune response against the pancreas and contributed to beta cell preservation. Newer studies are investigating whether the elimination of B cells with analogous treatments targeting CD20, a B cell surface marker, might have the same effect. Other anti-inflammatory agents are being scrutinized as well.

Relatives of children with type 1 diabetes are now able to be screened for the presence of diabetes associated autoantibodies to stratify their own risk of diabetes development, and in high risk children, the first prevention trials are just now getting underway. Each of these studies, it is hoped, will allow us to make further inroads towards making life better for children and families dealing with diabetes.

For more information about new therapies for children with diabetes, please email Soumya Adhikari, M.D. at [soumya.adhikari@childrens.com](mailto:soumya.adhikari@childrens.com).

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## SERVICE UPDATE: Pediatric Pain Management

Pediatric pain management at Children's offers inpatient and outpatient treatment for children with acute and chronic pain that is often resistant to conventional therapies. The multidisciplinary clinic assesses and treats children with neuropathic pain, complex regional pain syndrome or CRPS/RSD, musculoskeletal pain, cancer pain and other chronic pain disorders. Each new patient is evaluated by a pediatric pain management physician and pediatric nurse practitioner, psychologist and a physical therapist.

For more information about pediatric pain management or to make a referral, call 1-800-CHILD-RX.