Recurrent acute and chronic pancreatitis in children has high disease burden, health care costs

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The burden of recurrent acute and chronic pancreatitis in children may be higher than previously thought, with high costs related to repeated hospitalizations, report a pair of studies in the *Journal of Pediatric Gastroenterology and Nutrition*.

One study finds a 42 percent rate of rehospitalizations in children after an initial pancreatitis attack, while the other study estimates annual health care costs of about $40,000 for children with recurrent acute or chronic pancreatitis. An accompanying editorial highlights the need for information and research to prevent suffering and reduce costs of recurrent acute and chronic pancreatitis in children.

**Recurrent Acute and Chronic Pancreatitis in Children Carries High Costs**

Pancreatitis is a serious condition in which the pancreas becomes inflamed. Acute pancreatitis is less common in children than adults, but seems to be increasing in prevalence. The new studies looked at the risks and costs of recurrent acute and chronic pancreatitis in children.

Using a national health database, Dr. Mojtaba Olyaee of University of Kansas and colleagues identified about 10,650 children and adolescents hospitalized for acute pancreatitis between 2002 and 2014. The 42 percent rate of repeat hospital admission for recurrent pancreatitis was
substantially higher than in previous studies.

This group of approximately 4,500 children had a total of nearly 16,000 repeat hospitalizations—a median of two per patient. The median time between admissions was about three months. Risk of acute recurrent pancreatitis appeared to be higher in younger children and those with a more severe initial episode, based on length of hospital stay, costs, and need for ICU care.

The second study analyzed hospital-related costs in 224 children with pancreatitis identified from INSPIRE, the nation's first and only multicenter pediatric pancreatitis registry. The study was performed by Drs. Jie Ting, Leslie Wilson, and Mel Heyman at the University of California, San Francisco and UCSF Benioff Children's Hospital, along with colleagues from the INSPIRE Project, led by Aliye Uc of University of Iowa Children's Hospital.

Forty-two percent of the children had chronic pancreatitis. The average number of hospitalizations was 2.3 per child per year, with estimated costs of nearly $39,000 per year.

Costs increased to nearly $43,000 for children treated by surgery, compared to about $12,000 for those who underwent an x-ray treatment procedure called endoscopic retrograde cholangiopancreatography (ECRP). Estimated annual medication costs were about $4,000 for pancreatic enzyme replacement therapy, $1,800 for diabetes drugs, and $600 for pain medications.

Costs were higher for children with more frequent pancreatitis attacks, constant or recurring pain, a family history of pancreatic cancer, and need for pain medications. "Interventions that reduce the need for hospitalization could lower costs for these children and their families," Dr. Uc and coauthors write.
They estimate that the costs of acute recurrent and chronic pancreatitis in US children are at least $60 to $70 million per year.

The results draw attention to the high health and financial impact of chronic pancreatitis in children, according to an editorial by Dr. William Estus Bennett, Jr., of Indiana University School of Medicine. He writes, "Recurrent pancreatitis is expensive because patients with recurrent pancreatitis use more services."

Dr. Bennett adds, "Both studies highlight an important weapon in our fight against this disease: information." He suggests establishing a nationwide registry of pancreatitis in children, enrolling more children in studies of pancreatitis treatments, and increasing research to understand the unique features of chronic pancreatitis in children—including genetic causes.


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