

Biomedical/Education Update:

Autistic constipation and 'megarectum' linked to milk intake

Serious constipation associated with "megarectum" (an abnormally enlarged colon or rectum) is very common in autistic children and may be associated with milk consumption, according to a new study.

Noting that autistic children often have significant gastrointestinal problems, Nadeem Afzal and colleagues decided to investigate the prevalence of severe constipation in autistic subjects. Studying abdominal radiographs, they compared 103 autistic children referred for gastrointestinal evaluation to 29 controls referred to a hospital emergency department, most of them for abdominal pain.

The researchers found that the controls had a higher-than-normal incidence of constipation, but say that despite this, "moderate or severe constipation was more frequent in the autistic group than in the control subjects (36 percent vs. 10 percent)." When they analyzed fecal "loading" in each group, they say, the found even more marked differences: more than 54 percent of the autistic children exhibited moderate to severe loading and resulting megarectum, compared to only 24 percent of the other children.

The researchers took detailed histories of the subjects' dietary and bowel control habits, and say the results "showed consumption of milk to be the strongest predictor of constipation in the autistic group." Gluten intake did not predict constipation.

Afzal and colleagues say their findings show that constipation is a common cause of autistic children's gastrointestinal symptoms, and is often associated with megarectum. This, they say, indicates the importance of performing abdominal radiographs in autistic children with GI problems.

"Constipation with acquired megarectum in children with autism," N. Afzal, S. Murch, K. Thirrupathy, L. Berger, A. Fagbemi, and R. Heuschkel, *Pediatrics*, Vol. 112, No. 4, October 2001, 939-42. Address: Nadeem Afzal, Centre for Pediatric Gastroenterology, Royal Free Hospital, Hampstead, London, UK.

Mellaril, lithium linked to elevated risk of choking

Mellaril and lithium may dramatically increase the risk of life-threatening choking incidents, according to a new study.

David Ruschena and colleagues used case registries to identify 70 individuals with a history of mental health issues who had died

from choking. The researchers investigated the actual and expected rates of psychiatric disorder in this group, and the presence of psychotropic drugs in post-mortem drug samples.

They report that people with a history of schizophrenia were greatly over-represented in the group, as were people with a history of an organic psychiatric syndrome. They also found that "the risk for those receiving thioridazine [Mellaril] or lithium was, respectively, 92 times and 30 times greater than expected." No increased association was seen with other antipsychotics.

The researchers conclude, "The increased risk of death in people with schizophrenia may be a combination of inherent predispositions and the use of specific antipsychotic drugs," while the elevated risk for people with organic psychiatric syndromes is consistent with the effects of compromised neurological functioning.

"Choking deaths: the role of antipsychotic medication," David Ruschena, Paul E. Mullen, Simon Palmer, Philip Burgess, Stephen M. Cordner, Olaf H. Drummer, Cameron Wallace, and Justin Barry-Walsh, *British Journal of Psychiatry*, Vol. 183, no. 5, 2003, 446-50. Address: Paul E. Mullen, Victorian Institute of Forensic Mental Health, Thomas Embling Hospital, Locked Bag 10, Fairfield, Victoria 3078, Australia.

Simple solution for picky eating

In some cases, getting a picky autistic eater to enjoy more foods might be a simple as adding ketchup, according to a recent study.

William Ahearn's subject was a 14-year-old autistic and profoundly retarded boy who avoided vegetables but ate other foods. Prior to intervention he refused to eat any of the three vegetables offered by Ahearn.

An assessment showed that the boy liked ketchup, barbecue sauce, and Italian dressing. During the intervention phase of the study, Ahearn offered vegetables with one of these three condiments. Immediately, the boy began accepting the vegetables every time they were presented. Afterward, the boy was taught to use a picture board to select condiments for each meal. His teachers reported that he ate his vegetables willingly, and he continued to do so at a one-year follow-up.

Editor's Note: Brilliant!

"Using simultaneous presentation to increase vegetable consumption in a mildly selective child with autism," William H. Ahearn, *Journal of Applied Behavior Analysis*, Vol. 36, NO. 3, Fall 2003, 361-5. Address: William H. Ahearn, New England Center for Children, 33 Turnpike Road, Southborough, MA 01772, Bahearn@nec.org.

Case study: anesthetic cream reduces self-injury

A single-case study supports the theory that some self-injurious behavior (SIB) is "automatically reinforcing," and occurs regardless of environmental influences such as a desire for attention or escape.

The subject of the study, conducted by Lee Kern and colleagues, was a nonverbal 12-year-old boy with autism and mental retardation. The boy's self-injurious behavior, which consisted of slapping himself dozens of times per minute, did not respond to drug treatments. By conducting a functional analysis, the researchers also found that the behavior did not change in the presence or absence of a variety of reinforcements. It also occurred at high rates whether the boy was alone or in the presence of others.

In addition, the researchers discovered that the boy almost always slapped uncovered areas of skin, and that his highest rates of SIB occurred in the shower when all of his skin was exposed. When all of his skin surfaces were covered by clothing and a helmet, his rate of SIB dropped to nearly zero.

Theorizing that the boy's SIB was self-reinforcing, Kern et al. conducted an experiment employing an anesthetic skin patch commonly used to numb skin for minor medical procedures. On two different days, they measured the boy's SIB without and then with the skin patch, reversing the order on a third day (after waiting for the anesthetic to wear off).

"The results," they say, "indicate that SIB was 26 to 45 percent lower during sessions when the topical anesthetic was applied." This indicates, they say, that the boy's slapping was automatically reinforcing.

"Effects of a topical anesthetic on non-socially maintained self-injurious behavior," Lee Kern, Deborah Bailin, and Joyce E. Mauk, *Developmental Medicine & Child Neurology*, Vol. 45, 2003, 769-71. Address: Lee Kern, College of Education, Lehigh University, 111 Research Drive, Bethlehem, PA 18015, lek6@lehigh.edu.

SCHOOLS AND SERVICES

The Autism Research Institute maintains a list of schools and services for autistic individuals. If your facility should be included on our list, and you believe it may not be, please send a self-addressed, stamped envelope to receive our referral list questionnaire.