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EFFECT OF MALNUTRITION ON EXECUTIVE FUNCTION IN OLDER EGYPTIANS IN GERIATRIC HOMES

To the Editor: Nutrition is an important determinant of health in elderly patients. The importance of nutritional status has been increasingly recognized in a variety of morbid conditions including cancer, heart disease, and dementia in persons aged 65 and older.[1]

Malnutrition is prevalent in elderly populations, even in the developed world.[2] The prevalence of malnutrition increases with age and is most common in institutionalized individuals.[3]

Undernutrition is associated with exacerbation of health conditions, frailty, and decline in physical and cognitive function.[4]

The aim of this study was to evaluate the effect of malnutrition on executive function in older Egyptian subjects in geriatric homes. The study was a case–control study. Participants were recruited from geriatric homes in Cairo, Egypt, and subdivided into two groups: Group 1: cases, 50 men and women aged 60 and older found to be malnourished (n = 28) or at risk of malnutrition (n = 22) according to the Mini Nutritional Assessment (MNA);[5] and Group 2: controls (matched for age and sex), 50 men and women aged 60 and older found to be well nourished according to MNA. Subjects with dementia (Mini-Mental State Examination score less than 26)[6] or depression (Geriatric Depression Scale score greater than 5)[7] were excluded from the study. Subjects with history of stroke, delirium, alcoholism, drug abuse, psychiatric disease, or thyroid disease were excluded, as were subjects with auditory or visual impairment or any organ failure.

Cognitive and executive functions were assessed using three neuropsychological tests: letter verbal fluency test,[8] animal verbal fluency test,[9] and Executive Interview 25 test (Exit25).[10] Nutritional assessment was performed using the Mini Nutritional Assessment. The mean EXIT25 score was significantly higher (impaired) in both the malnourished group ($P < .001$) and the group at risk of malnutrition ($P = .002$) than in the well-nourished group. Also letter and animal verbal fluency test scores were significantly lower in the malnourished group than in the control subjects ($P < .001$).

Elderly subjects with malnutrition or at risk of malnutrition had poorer cognitive and executive function than well nourished elderly subjects.

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SEVERE HUMAN RHINOVIRUS OUTBREAK ASSOCIATED WITH FATALITIES IN A LONG-TERM CARE FACILITY IN ONTARIO, CANADA

To the Editor: Rhinovirus (HRV) infections are one of the most common causes of viral illnesses in humans. Infection of healthy adults with HRV can lead to a self-limited upper respiratory tract illness, also known as the common cold, but it can cause more-severe disease in elderly patients, such as exacerbations of chronic lung disease, pneumonia, and death.[1,2] Several reports of HRV outbreaks in elderly patients have been described.[3–6] An outbreak of rhinovirus in a long-term care facility (LTCF) causing severe disease

Part of this data was presented as a poster at the American Society for Microbiology annual meeting 2010.

in the province of Ontario during the 2009 pandemic of influenza A H1N1 (pH1N1) is reported.

The LTCF involved is a 42-bedroom, 60-resident home located in an urban setting and staffed by 100 employees. The local Department of Public Health received notification of a respiratory outbreak on July 13, 2009. Outbreak control measures at the facility were implemented, and local physicians performed medical management. Nasopharyngeal swabs were collected and tested using reverse transcriptase polymerase chain reactin for the presence of adenovirus, influenza A/B, parainfluenzae 1 to 3, respiratory syncytial virus (RSV) A and B, rhinovirus A, and coronavirus OC43/229E/NL63 viruses using the Seeplex RV kit (Seegene USA, Rockville, MD) according to the manufacturer's instructions. In addition, standard viral and bacterial cultures, rapid antigen testing for influenza A/B and RSV, *Legionella* direct fluorescent antibody and culture and urine antigen, and *Mycoplasma pneumoniae/Chlamydophila pneumoniae* nucleic acid testing were performed.

Thirty-two residents and 21 staff developed respiratory symptoms (attack rates of 53% and 21%, respectively). The outbreak lasted 43 days and peaked 9 days after declaration. The average age of affected residents was 87.6 (range 75–102). HRV was identified in five of 14 nasopharyngeal swabs from symptomatic residents; no other pathogens (viral or bacterial) were detected. Seven deaths occurred during this outbreak. Six fatalities were identified as due to pneumonia or respiratory infection and one due to "failure to thrive" related to a fractured femur. To determine the virus type, the 5′ UTR, VP4/VP2, and VP1 regions of HRV-positive samples were amplified and sequenced. Nucleotide sequence showed 93% homology to HRV-A 33 strain ATCC VR-330 (accession number FJ445128). Sequences were deposited in GenBank database under the nucleotide sequence accession numbers GU477327, GU477328, GU477335, GU477336, GU477341, and GU477342.

HRV is increasingly recognized as capable of causing frequent or severe clinical manifestations. In a study from the United Kingdom of community-dwelling older adults, HRV accounted for 52% of identified respiratory pathogens, with a lower-respiratory tract clinical presentation in 64% of cases.[7] Several reports have documented the importance of rhinovirus infection in elderly patients, and the high mortality described here is consistent with recent published reports.[2,5,6] Detection of rhinoviruses has long been a problem for clinical identification, because the extreme diversity of these viruses renders the immunofluorescence antigen detection method not useful, and the cytopathic effects associated with HRV are often spurious, rendering viral culture unreliable.[8,9] Moreover, because multiple serotypes exist, of retrospective serology cannot be used to evaluate the burden of HRV disease.[2] As a result, a significant underestimate of the number of outbreaks and the recognition of morbidity and mortality associated with HRV is likely. Nucleic acid testing is a more-sensitive tool than viral culture for diagnosis of HRV A and B and may be the only way to detect HRV-C.[9,10]

With sensitive nucleic acid testing methods, viruses detected from nasopharyngeal swabs may represent asymptomatic colonization or nonliving organisms, and causality must be made cautiously. Because specimens from the lower respiratory tract (e.g., bronchoscopy or autopsy) were not available it is not possible to state with certainty that rhinovirus was present in the lower respiratory tract of all fatalities, although because no other pathogens were found despite extensive microbiological investigation, it is likely that HRV was the main cause of this outbreak and related deaths. In conclusion, rhinovirus can present with severe and lethal disease and mimic other severe respiratory viral illnesses. Because this outbreak occurred temporally during the North American influenza A H1N1 pandemic, multiplex nucleic acid–based respiratory testing was the cornerstone in differentiating rhinoviruses from influenza and in steering outbreak management, antiviral use, and vaccination. Because lower respiratory tract infections are leading contributors to significant morbidity in LTCF and are due to an undetermined etiology in more than half of cases when using traditional methods such as antigen testing and viral culture, prompt diagnosis using molecular tools will be increasingly important in outbreak settings such as LTCFs.

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A GIANT INTRA-ABDOMINAL MASS IN A 68-YEAR-OLD WOMAN

To the Editor: A solid pseudopapillary neoplasm (SPN) of the pancreas is a rare exocrine pancreatic tumor accounting for only 1% to 2% of all pancreatic tumors. It occurs mostly in young women and is extremely rare in elderly patients. The tumor has a low malignant potential that occurs mainly during the second to fourth decades of life.[1] The prognosis is very good, and more than 90% of patients can recover with surgery alone. Herein, a case of SPN presenting with recurrent gastrointestinal bleeding and a huge abdominal mass is reported.

A 68-year-old woman was referred to the Department of Internal Medicine because of recurrent gastrointestinal bleeding. She had been admitted to the hospital with the complaint of abdominal fullness and weakness 1 year before. Computed tomography (CT) had showed an intra-abdominal mass. She had undergone surgery and resection of the mass, and distal pancreatectomy, Roux-Y gastrojejunal anastomosis and cystojejunostomy had been performed. Surgical pathology had revealed a diagnosis of SPN. She had had melena for the first time 6 months after surgery and had been admitted to the emergency department. Upper gastrointestinal system endoscopy and colonoscopic examination were unremarkable. She had had melena twice before her admission.

At admission, physical examination revealed an immobilized mass in the left abdomen. Laboratory findings were normal other than anemia (hemoglobin 7.8 g/dL; normal range 11.7–16.1 g/dL)). Repeated upper gastrointestinal endoscopy and colonoscopy were also unremarkable. The small bowel was evaluated using double-balloon enteroscopy, which revealed nonbleeding ulcers at the cystojejunostomy junction. Abdominal CT showed a heterogeneous intra-abdominal mass with a diameter of 17 × 16 × 13.5 cm compressing the left renal vein (Figure 1). She was referred to surgery. The mass was removed completely, and a left nephrectomy and adrenalectomy were performed. a fibrous capsule surrounded the resected neoplasm. The inner wall of the mass had hemorrhagic focus and focal necrosis. Microscopic examination showed a solid pattern consisting of nuclear pleomorphism and eosinophilic polygonal cells with oval nuclei. Immunohistochemical analyses showed positive staining for vimentin (stoplasmic, strong), s-100 (nuclear, strong), progesterone (nuclear), and CD 99 (membranous, strong); the other stains were negative. The proliferation index (by Ki67) was approximately 40%. Overall histological analysis was compatible with SPN, indicating a recurrence of SPN. She was free of any symptoms after 1 year of follow-up.

SPNs are considered benign or low-grade malignant tumors with an excellent prognosis. In people aged 60 and older, its prevalence is rare. Overall 5-year survival is estimated to be 95%. Recurrence after surgical treatment has

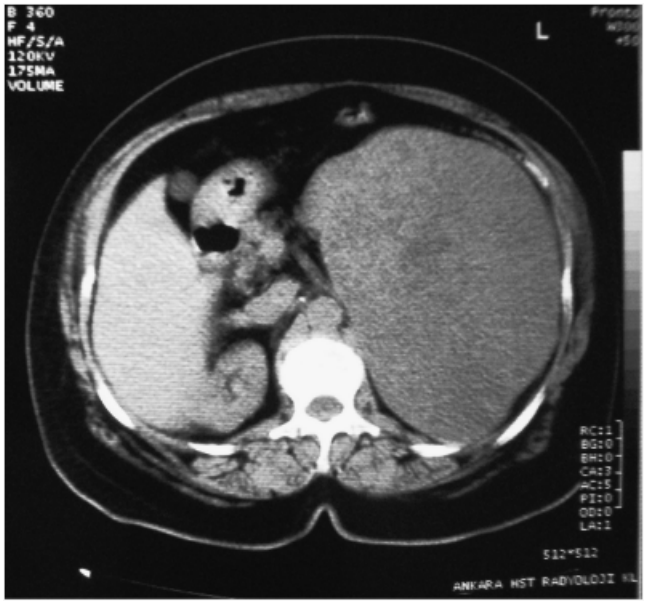

Figure 1. Computed tomography showing a large mass in the left abdomen.