Karachi Psychiatric Hospital

BULLETIN

(Psychiatric Research Articles)

September 2017

CHIEF EDITOR:

DR. SYED MUBIN AKHTER

MONTHLY PSYCHIATRIC DOCTORS MEETING 9-10-2017

Dr.Imran Choudhry and his team of Pakistan Institute of Living & Learning (PILL) had a meeting with Dr. Syed Mubin Akhtar and the other Psychiatrists of Karachi Psychiatric Hospital.

At Karachi Psychiatric Hospital

Table of Contents

IMANA* Ophthalmology Reception Report

Cataract removal is one of the most common operations and one of the safest and most effective types of surgery performed in developed countries. 90 percent of people who have cataract surgery have better vision afterward. However, people in underdeveloped nations do not have access to such eye care; the problem is much more acute in refugee populations who do not have access even to basic healthcare.

IMANA Medical Relief is a registered 501(c) (3) nonprofit organization. All donations are tax exempt. Tax ID: #36-4166125

On Saturday, October 15, 2016, over 75 Ophthalmologists from various locations came to the IMANA Ophthalmology Reception at Alhambra Palace Restaurant in Chicago, IL. The reception was organized by Muslim Ophthalmologists on the weekend of the American Academy of Ophthalmology (AAO) Annual Meeting held at The McCormick Place in Chicago, IL.

IMANA Ophthalmology is one of the most active specialties recognized under IMANA. IMANA Specialities is a resourceful platform for Muslim healthcare practitioners to connect with professionals in the field for growth opportunities and provides a forum to contribute to the welfare of society through one's unique expertise. Other recognized specialities include IMANA Radiologists, Allied Health, Public Health, and Dental.

As guests began to settle in, the event emcees, Drs. Osamah Saeedi and Sameer Ahmad who led the successful initiative warmly welcomed everyone. Dr. Saeedi introduced Dr. Kamran Riaz

*** Islamic Medical Association of North America**

who shared an introductory recitation of the Holy Qur'an. The event was underway as reception guests were introduced to Dr. Nadia K. Waheed of Tufts University School of Medicine. Dr Waheed is Director of the Boston Image Reading Center and Assistant Professor of Ophthalmology at Tufts in Boston. Her research interests include ocular imaging, diabetic eye disease, and age-related macular degeneration, as well as clinical trial design and analysis.

Guests reveled in an engaging and knowledgeable presentation by Dr. Waheed while they enjoyed each other's company and the exquisite Alhambra Palace Restaurant ambiance. Questions from various corners of the room were asked and discussion was sparked.

Soon after, Dr. Ahmad presented the Award of Excellence to Dr. Abdul Mateen Ahmed of New World Medical in recognition of his innovation and excellence in the field of ophthalmology. "We recognize Dr. Ahmed in his excellence in Ophthalmology, philanthropy, generosity, support and glaucoma work worldwide," said Dr. Ahmad. The crowd agreed wholeheartedly.

"This guy, he knows his glaucoma," Dr. Ahmad said. Dr. Suhail Abdullah and Dr. Khaled Bahjri from New World Medical were at the reception representing Dr. Ahmed. Dr. Abdullah accepted the award on his behalf. He notified the audience about new humanitarian initiatives being done including a $10,000 Annual Glaucoma Fellow Award and a $50,000 award to a non-profit/academic institution working on surgical skills transfer.

For many it was their first IMANA event. "It was my first time attending an IMANA meeting. I was very delighted and impressed to see a big number of Muslim doctors achieving excellent positions in AAO and in the Ophthalmology field," claims Dr. Marwan Abouammoh an ophthalmologist from Riyadh, Saudi Arabia.

Many guests expressed their goals with IMANA. "I think one of the primary things that can be very helpful, would be to help coordinate a muslim cataract mission" said Dr. Oussama Boundaoui, an active ophthalmologist in Bridgeview, IL.

The event successfully provided a platform for ophthalmologists an opportunity to network and share an array of ideas. IMANA aims to navigate the discussions which occurred at the event and produce them into real results. Many guests expressed their interest in performing relief work worldwide. The evening was enjoyed by all who attended.

IMANA would be delighted to work with anyone interested in providing a forum for their specialty. Please contact IMANA HQ at hq@imana.org if you are interested in starting a forum. IMANA HQ facilitates all the logistics, marketing, and any financial processing and related administrative tasks for IMANA Specialty meetings.

Long-Term Acetaminophen and NSAID Use Tied to Hearing Loss

By Kelly Young

Edited by *André Sofair, MD, MPH*, and *William E. Chavey, MD, MS*

Regular, long-term use of acetaminophen and nonsteroidal anti-inflammatory drugs is associated with modestly elevated risk for hearing loss in women, suggests an *American Journal of Epidemiology* study.

Over 55,000 women aged 44–69 in the Nurses' Health Study answered questions about incident hearing loss and how often they took aspirin, acetaminophen, and NSAIDs.

During 873,000 person-years' follow-up, nearly 19,000 women said they developed hearing loss. After multivariable adjustment, regular NSAID and acetaminophen use (2 or more days per week) for more than 6 years was associated with incident hearing loss, compared with less than 1 year of use (relative risks, 1.10 and 1.09). Aspirin use showed no association.

The authors conclude: "Considering the high prevalence of analgesic use and the high probability of frequent and/or prolonged exposure in women of more advanced age, our findings suggest that NSAID use and acetaminophen use may be modifiable risk factors for hearing loss."

Sweet Solutions Are Effective for Procedural Pain Control in Neonates

By Daniel M. Lindberg, MD

Dr. Lindberg is an associate editor with NEJM Journal Watch Emergency Medicine*, from which this story was adapted. Full coverage is available at the link below.*

Evidence that sweet solutions improve pain for neonates during painful procedures has been compelling for more than a decade, according to a meta-analysis in *Pediatrics*.

Using a robust search strategy, researchers identified 168 randomized, controlled trials of oral sweet solutions for procedural pain control in neonates.

Pooled results showed that sweet solutions reduced crying time by a mean of 23 seconds and improved pain scores by a mean of 0.90 points. The cumulative results became statistically

significant in 1999 for pain scores and in 2002 for crying time, yet dozens of studies have been performed since then.

Comment: At some point, it is unethical to ignore evidence that is clear and convincing. Sweet solutions improve crying time and pain scores for neonates, have virtually no untoward effects, and should be used for painful procedures. Future trials should not include a placebo arm.

IMANA* Elects a New President

Dear IMANA Members and Supporters,
Asalaamu-Alaikum!

On behalf of the IMANA's leadership, past and present, I thank you for your contributions in making IMANA the largest network of Muslim physicians in North America. Since its inception in 1967, IMANA has provided a platform for Muslim healthcare providers of diverse backgrounds to come together to help build communities across the United States and Canada, to educate ourselves and other physicians abroad, and to provide healthcare services both domestically and internationally. 2017 marks a major milestone for our organization. IMANA is now a half-century old and it is time to reflect and celebrate!

"So remember Me; I will remember you. And be grateful to Me and do not deny Me. O you who have believed, seek help through patience and prayer. Indeed, Allah is with the patient." (Quran 2:152-3).

We all have much to be thankful for and much to look forward to. There will be challenges in 2017 and beyond, but collectively we can overcome them. Let us remember the Almighty, so He will remember us. Let us have patience and pray for a healthy, safe, and prosperous New Year!

Wasalaam-Alaikum,

Asif Malik, MD (MI)
IMANA President

*** Islamic Medical Association of North America**

Guideline Sets Moderate Blood Pressure Treatment Targets for Older Adults

By Kelly Young

Edited by *David G. Fairchild, MD, MPH*, and *Jaye Elizabeth Hefner, MD*

The American College of Physicians and the American Academy of Family Physicians recommend moderate blood pressure targets for adults aged 60 and over.

The guidelines, published in the *Annals of Internal Medicine*, recommend the following for older adults:

- Patients with a systolic blood pressure consistently at 150 mm Hg or higher should start treatment and aim for systolic BP of less than 150 mm Hg.
- Patients with a history of stroke or transient ischemic attack and some of those at high cardiovascular risk (e.g., older patients with diabetes, chronic kidney disease, metabolic syndrome) should consider starting or intensifying antihypertensive drug therapy and aim for a target systolic BP of less than 140 mm Hg.

NEJM Journal Watch Cardiology editor-in-chief Harlan M. Krumholz commented: "The guidelines reflect a crisis of uncertainty about whether and how to treat other than markedly elevated blood pressure in people 60 years and older, a problem that affects so many. I have no doubt that many patients and their doctors are unsettled by the uncertainty about which targets and drugs are best for which people — I know that I am. It's time for the NIH to embark on an evidence-generation binge in the study of hypertension, with a portfolio of studies that will fundamentally reshape the evidence base, with attention to being poised for personalization of recommendations."

Multiparametric MRI Might Help Men Avoid Unnecessary Prostate Biopsies

By Kelly Young

Edited by *André Sofair, MD, MPH*, and *William E. Chavey, MD, MS*

Multiparametric magnetic resonance imaging (MP-MRI) may help clinicians identify roughly a quarter of men who could avoid unnecessary prostate biopsies, according to an industry-supported study in the *Lancet*.

Nearly 600 men with suspected prostate cancer who were biopsy-naive underwent three tests: MP-MRI, transrectal ultrasound-guided biopsy (TRUS-biopsy), and transperineal template prostate mapping biopsy (TPM-biopsy). Using TPM-biopsy as the reference standard, 40% of men were diagnosed with clinically significant prostate cancer. MP-MRI had greater sensitivity than TRUS-biopsy for detecting clinically significant cancers (93% vs. 48%) but lower specificity (41% vs. 96%). If follow-up biopsy were performed only in men with suspicious MP-MRI scores, then 27% would potentially avoid primary biopsy.

The authors conclude: "The primary outcome data provide a strong argument for recommending MP-MRI to all men with an elevated serum PSA before biopsy. Using MP-MRI as a triage test would reduce the problem of unnecessary biopsies ... reduce the diagnosis of clinically insignificant disease and improve the detection of clinically significant cancers."

New FDA, EPA Fish Consumption Guidance for Pregnant Women and Young Kids

By Kelly Young

Edited by *Susan Sadoughi, MD*

The FDA and Environmental Protection Agency have broken down which fish are safest to eat — based on mercury levels — for young children and women of childbearing age, particularly those who are breast-feeding or pregnant.

Consistent with other dietary guidelines, the agencies recommend that women of childbearing age eat two to three servings of fish lower in mercury every week. Children should eat one to two servings weekly. For adults, a serving is 4 ounces of uncooked fish; for children aged 4–7 years, it's 2 ounces.

Adults should eat two to three servings weekly of "best choice" fish (e.g., canned light tuna, cod, crab, haddock, lobster, shrimp, salmon, tilapia) or one serving weekly of "good choice" fish (e.g., yellowfin and albacore tuna, grouper, halibut, mahi mahi). The "best choice" category includes 90% of the fish eaten in the U.S., according to the FDA.

"Fish to avoid" because of their high mercury content include king mackerel, marlin, orange roughy, shark, swordfish, Gulf of Mexico tilefish, and bigeye tuna.

The chart linked below categorizes 62 types of fish based on their average mercury levels.

Nearly Half of U.S. Men Could Have Genital HPV Infection

By Amy Orciari Herman

Edited by *André Sofair, MD, MPH*, and *William E. Chavey, MD, MS*

Genital human papillomavirus infection is common among men, and vaccination coverage is low, according to a study in *JAMA Oncology*.

As part of the 2013–2014 National Health and Nutrition Examination Survey, some 1800 men aged 18–59 self-collected penile swab specimens, which were sent to the CDC for HPV genotyping. Roughly 45% were positive for HPV. High-risk HPV was found in 25% overall.

Among men eligible for HPV vaccination, 7% tested positive for at least one strain included in the four-valent vaccine, and 15% were positive for at least one in the nine-valent vaccine. Just 11% of vaccine-eligible men had been vaccinated.

The researchers call for increased HPV vaccination, noting that it "may have a profound effect on the prevention of HPV-related cancers in male and female individuals because one serves as host for the other, in addition to [HPV] being a direct cause of anogenital and oropharyngeal cancers."

Optimizing Chances for Successful Outpatient Opioid Detoxification

Joel Yager, MD reviewing Sullivan M et al. Am J Psychiatry

One week of escalating oral naltrexone administration achieved better results than standard buprenorphine induction in transitioning patients to extended-release naltrexone injections.

The contemporary epidemics of opioid abuse and overdose demand effective outpatient treatment options. Intramuscular extended-release (XR) naltrexone (an opiate antagonist) offers one option, but guidelines recommend 7 to 10 days of abstention from opiates beforehand to prevent precipitated withdrawal. This abstention period has proven problematic, and relapse rates have been high. These researchers compared the standard buprenorphine induction strategy before XR-naltrexone injection with a detoxification protocol assisted with oral naltrexone.

The 150 opiate-dependent adults were openly randomized in a 2:1 ratio to the protocols (mean age, 35; women, 14%; white, 64%); 37% primarily used prescription opioids (rather than heroin). Naltrexone-assisted induction consisted of a single buprenorphine dose followed by 7 days of escalating oral-naltrexone doses, along with clonidine and other medications. Buprenorphine assistance involved 7 days of decreasing buprenorphine doses, followed by a week-long delay before XR-naltrexone injection.

Rates of moderate-to-severe withdrawal symptoms were low for both groups, and adverse events were generally consistent with mild withdrawal. Successful transitions to initial injections were achieved by significantly more oral-naltrexone patients than buprenorphine patients — 56% vs. 33%. Overall, prescription-opiate users were almost four times more successful than heroin users in successfully transitioning to XR-naltrexone. Successful second XR injections 5 weeks later occurred in 50% of the oral-naltrexone vs. 27% of the buprenorphine-assisted groups. Ongoing abstinence in weeks 4 and 5 after successful transitions was similar (oral naltrexone, 81%; buprenorphine, 88%).

COMMENT

Oral naltrexone-assisted patients transitioned to XR-naltrexone on day 8 at significantly higher rates than did buprenorphine-assisted patients who transitioned on day 15, and the majority achieving transition returned for second injections. These findings represent higher transition and retention rates than those in many previous reports; however, better methods are still needed, especially for heroin users.

Physical Activity Tied to Less Depression in Young Children

By Amy Orciari Herman

Edited by *Susan Sadoughi, MD*, and *André Sofair, MD, MPH*

Moderate-to-vigorous physical activity is associated with fewer depression symptoms even in elementary-school-aged children, according to an observational study in *Pediatrics*.

Some 800 children in Norway were assessed for depression and level of physical activity (using waist accelerometers) at ages 6, 8, and 10 years. The prevalence of major depression was under 0.5% at all three ages.

In adjusted analyses, higher levels of moderate-to-vigorous physical activity at ages 6 and 8 were associated with fewer depression symptoms 2 years later. Each hour of activity per day conferred roughly 0.2 fewer depression symptoms. Sedentary behavior, however, was not associated with major depression.

The authors write, "Although the effects of [physical activity] were small, they are similar to those obtained by psychosocial intervention programs in children and adolescents." They conclude, "Increasing [physical activity] in children at the population level may prevent depression, at least at subclinical levels."

Seeking Mental Health Care Early in Adolescence Tied to Lower Depression Risk Later

By Kelly Young

Edited by *Susan Sadoughi, MD*, and *Richard Saitz, MD, MPH, FACP, DFASAM*

For adolescents with mental health disorders, contact with a mental health provider in early adolescence is associated with reduced risk for depression 3 years later, according to a study in the *Lancet Psychiatry*.

U.K. researchers surveyed 1200 adolescents at age 14 and again at 17. Of the 14-year-olds with a mental health disorder, those who had not had contact with mental health services — either through a primary care provider or mental health specialist — had seven times the risk for clinical depression at age 17 relative to those who did seek care. (Most had five or more sessions.) For those who sought mental health care at age 14, depression scores at age 17 were similar to scores among those who did not have a mental health disorder.

Commentators say the study "is important in empirically showing the long-term beneficial effects of prompt treatment of adolescent mental health problems."

"Weekend Exercise" has Survival Benefits

By Amy Orciari Herman

Exercising just a couple of times a week could help lower your mortality risk, finds an observational study in *JAMA Internal Medicine*.

Researchers examined data on nearly 64,000 U.K. adults aged 40 and older who reported on their activity level several times from 1994 through 2008. Activity levels were defined as follows:

- Inactive: no moderate-to-vigorous activity
- Insufficiently active: <150 minutes/week of moderate-intensity activity and <75 min/wk of vigorous-intensity activity

- "Weekend exercise": ≥150 min/wk of moderate-intensity or ≥75 min/wk of vigorous-intensity activity from 1–2 sessions
- Regularly active: ≥150 min/wk of moderate-intensity or ≥75 min/wk of vigorous-intensity activity from 3 or more sessions

During some 9 years' follow-up, 8800 participants died, including 2800 from cardiovascular disease (CVD) and 2500 from cancer. Compared with inactive adults, insufficiently active adults and weekend warriors had significant risk reductions in all-cause mortality (about 30%) and CVD mortality (about 40%); regularly active adults had slightly greater risk reductions. Reductions in cancer mortality ranged from 14% for insufficiently active adults to 21% for regularly active adults.

Impaired Glucose Homeostasis in First-Episode Schizophrenia

A Systematic Review and Meta-analysis

Toby Pillinger, MRCP[1]; Katherine Beck, MRCPsych[1]; Cristian Gobjila, MSc[1]; et alJacek G. Donocik, MRCPsych[1]; Sameer Jauhar, MRCPsych[1]; Oliver D. Howes, PhD[1,2,3]

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JAMA Psychiatry. 2017;74(3):261-269. doi:10.1001/jamapsychiatry.2016.3803

Key Points

Question Do individuals with first-episode schizophrenia already demonstrate evidence of glucose dysregulation?

Findings In this meta-analysis of 14 case-control studies comprising 1345 participants, individuals with first-episode schizophrenia had elevated fasting plasma glucose levels, elevated plasma glucose levels after an oral glucose tolerance test, and elevated fasting plasma insulin levels, as well as greater insulin resistance compared with healthy individuals serving as controls.

Meanings Glucose homeostasis is altered from illness onset in schizophrenia, indicating that patients are at increased risk for type 2 diabetes as a result; this finding has implications for the monitoring and treatment of patients with schizophrenia.

Abstract

Importance Schizophrenia is associated with an increased risk of type 2 diabetes. However, it is not clear whether schizophrenia confers an inherent risk for glucose dysregulation in the absence of the effects of chronic illness and long-term treatment.

Objective To conduct a meta-analysis examining whether individuals with first-episode schizophrenia already exhibit alterations in glucose homeostasis compared with controls.

Data Sources The EMBASE, MEDLINE, and PsycINFO databases were systematically searched for studies examining measures of glucose homeostasis in antipsychotic-naive individuals with first-episode schizophrenia compared with individuals serving as controls.

Study Selection Case-control studies reporting on fasting plasma glucose levels, plasma glucose levels after an oral glucose tolerance test, fasting plasma insulin levels, insulin resistance, and hemoglobin A_{1c} (HbA_{1c}) levels in first-episode antipsychotic-naive individuals with first-episode schizophrenia compared with healthy individuals serving as controls. Two independent investigators selected the studies.

Data Extraction Two independent investigators extracted study-level data for a random-effects meta-analysis. Standardized mean differences in fasting plasma glucose levels, plasma glucose levels after an oral glucose tolerance test, fasting plasma insulin levels, insulin resistance, and HbA_{1c}levels were calculated. Sensitivity analyses examining the effect of body mass index, diet and exercise, race/ethnicity, and minimal (≤2 weeks) antipsychotic exposure were performed.

Data Synthesis Of 3660 citations retrieved, 16 case-control studies comprising 15 samples met inclusion criteria. The overall sample included 731 patients and 614 controls. Fasting plasma glucose levels (Hedges $g = 0.20$; 95% CI, 0.02 to 0.38; $P = .03$), plasma glucose levels after an oral glucose tolerance test (Hedges $g = 0.61$; 95% CI, 0.16 to 1.05; $P = .007$), fasting plasma insulin levels (Hedges $g = 0.41$; 95% CI, 0.09 to 0.72; $P = .01$), and insulin resistance (homeostatic model assessment of insulin resistance) (Hedges $g = 0.35$; 95% CI, 0.14 to 0.55; $P = .001$) were all significantly elevated in patients compared with controls. However, HbA_{1c} levels (Hedges $g = -0.08$; CI, −0.34 to 0.18; $P = .55$) were not altered in patients compared with controls.

Conclusions and Relevance These findings show that glucose homeostasis is altered from illness onset in schizophrenia, indicating that patients are at increased risk of diabetes as a result.

This finding has implications for the monitoring and treatment choice for patients with schizophrenia.

Divorce and the Onset of Alcohol Use Disorder: A Swedish Population-Based Longitudinal Cohort and Co-Relative Study

(https://doi.org/10.1176/appi.ajp.2016.16050589)

Kenneth S. Kendler, M.D., Sara Larsson Lönn, Ph.D., Jessica Salvatore, Ph.D., Jan Sundquist, M.D., Ph.D., Kristina Sundquist, M.D., Ph.D.

Abstract

Objective:

The purpose of this study was to clarify the magnitude and nature of the relationship between divorce and risk for alcohol use disorder (AUD).

Method:

In a population-based Swedish sample of married individuals (N=942,366), the authors examined the association between divorce or widowhood and risk for first registration for AUD. AUD was assessed using medical, criminal, and pharmacy registries.

Results:

Divorce was strongly associated with risk for first AUD onset in both men (hazard ratio=5.98, 95% CI=5.65–6.33) and women (hazard ratio=7.29, 95% CI=6.72–7.91). The hazard ratio was estimated for AUD onset given divorce among discordant monozygotic twins to equal 3.45 and 3.62 in men and women, respectively. Divorce was also associated with an AUD recurrence in those with AUD registrations before marriage. Furthermore, widowhood increased risk for AUD in men (hazard ratio=3.85, 95% CI=2.81–5.28) and women (hazard ratio=4.10, 95% CI=2.98–5.64). Among divorced individuals, remarriage was associated with a large decline in AUD in both sexes (men: hazard ratio=0.56, 95% CI=0.52–0.64; women: hazard ratio=0.61, 95% CI=0.55–0.69). Divorce produced a greater increase in first AUD onset in those with a family history of AUD or with prior externalizing behaviors.

Conclusions:

Spousal loss through divorce or bereavement is associated with a large enduring increased AUD risk. This association likely reflects both causal and noncausal processes. That the AUD status of the spouse alters this association highlights the importance of spouse characteristics for the behavioral health consequences of spousal loss. The pronounced elevation in AUD risk following divorce or widowhood, and the protective effect of remarriage against subsequent AUD, speaks to the profound impact of marriage on problematic alcohol use.

Does Having an Abortion Cause Long-Lasting Psychological Distress?

Diane E. Judge, APN/CNP reviewing Biggs MA et al. JAMA Psychiatry

Not according to this longitudinal cohort study, which suggests that being denied a requested abortion is more likely to cause adverse mental health effects.

Some states mandate that, before being allowed access to abortion, women be “counseled” about purported adverse mental health consequences of the procedure. Is this requirement scientifically justified? The Turnaway Study of 30 abortion clinics (gestational limits from 10 weeks to end of second trimester) in 21 states comprised three groups: 452 women receiving abortions (exclusions included fetal anomaly or demise and maternal health indications) within 2 weeks of the clinics' gestational limits (near-limit group); 231 who were denied abortions within 3 weeks beyond the gestational limit (turnaway group, subdivided into 161 who ultimately gave birth and 70 who miscarried or obtained abortions elsewhere), and 273 who received first-trimester abortions. All participants (mean age, 25; racially/ethnically diverse; primarily single without mental health histories) were telephone-interviewed using validated mental health measures 1 week after seeking abortions and semiannually for 5 years. About 58%, similarly distributed among groups, completed the study.

At baseline, both anxiety and depression symptom scores were lowest for the first-trimester and near-term group and highest for the two turnaway groups; in general, scores improved over time. Scores designating self-esteem and satisfaction with life were initially lowest among the two turnaway groups and later improved; scores for the two other groups improved or remained stable. History of mental health conditions or traumatic life events was the most significant factor associated with excess risk for adverse psychological outcomes following an abortion.

COMMENT

In this longitudinal study of the psychological trajectory associated with abortion, women who did not receive wanted abortions experienced greater baseline mental distress than those who did obtain such abortions. As the authors conclude, these findings refute policies that curtail women's access to abortion on the basis that the procedure harms their mental health.

Important Recent Research in Psychiatry

Peter Roy-Byrne, MD

A perspective on the clinically most important research from the past year

1. Phototherapy:

Two stories document the effectiveness of light manipulations for mood disorder — either providing phototherapy for patients with nonseasonal depression (you don't have to have "winter depression" to benefit) or restricting light with the use of blue-blocking glasses to attenuate mania.

2. Methylphenidate (Madalin):

Use of methylphenidate in bipolar patients with attention-deficit/hyperactivity disorder (ADHD) is likely safe, provided the patient is already taking a mood stabilizer, but will likely cause mood dysregulation in patients not using a stabilizer.

3. Antidepressant:

Adding an antidepressant to the antipsychotic regimen of a schizophrenic patient can improve depression without risking exacerbation of psychosis.

4. Mania Treatment:

Discontinuing an antipsychotic after 6 months of antimania treatment in a bipolar patient likely is safe and does not risk manic relapse.

5. Suicide:

A novel psychosocial treatment for suicidality helps clinicians construct plans that directly address triggers for suicidal ideation. This study provides useful direction for clinicians looking to improve their office management of this troubling problem.

Add-On Antidepressants for Patients with Schizophrenia

Joel Yager, MD reviewing Helfer B et al. Am J Psychiatry

High-quality evidence supports antidepressant–antipsychotic combinations, and perhaps particularly for patients with marked depressive or negative symptoms.

Patients with schizophrenia often develop depressive symptoms, and about 30% receive antidepressants. In individual studies, adding antidepressants to antipsychotics benefited these patients, but changes in practice often require more substantial evidence. Now, investigators have systematically reviewed 82 randomized, controlled studies (91% double-blind) published in 1964–2014 involving 3608 patients with schizophrenia who received antipsychotics plus antidepressants or control (placebo or no adjunctive treatment).

Participants were inpatients or outpatients (61% male; mean age, 40; mean duration of illness, 11 years; mean chlorpromazine equivalents, 604 mg/day). Overall, add-on antidepressants (mean fluoxetine equivalent, 31 mg/day) were superior to controls in alleviating depressive symptoms (number needed to treat [NNT], 9), negative symptoms (NNT, 9), overall symptoms (NNT, 14), positive symptoms (NNT, 14), and quality of life (NNT, 9). Compared with controls, antidepressants did not exacerbate psychosis or increase premature discontinuation due to ineffectiveness or adverse effects.

Effect sizes for adjunctive treatment showed a trend to be larger for subpopulations with more pronounced depressive symptoms, postpsychotic depression, and negative symptoms. No differences were found in analyses of individual antidepressants, although several (monoamine oxidase inhibitors as a group, amitriptyline, duloxetine, sertraline, and trazodone) seemed individually better than controls. Selective serotonin reuptake inhibitors (particularly citalopram and fluvoxamine) appeared to improve negative symptoms.

COMMENT

With limited data on individual antidepressants, few recommendations can be offered on how to select the best medication for specific clinical scenarios. Nevertheless, high-quality evidence was sufficient to support the authors' conclusions that adding antidepressants to antipsychotics is safe and effective. Future studies should consider effects of administering antidepressants at different points during the course of illness (e.g., during acute psychotic episodes vs. chronic stages). Clinicians should consider adding antidepressants to antipsychotics routinely for patients with schizophrenia, particularly for those with marked depressive or negative symptoms.

ADA Issues Statement on Preventing and Managing Diabetic Neuropathies

By Amy Orciari Herman

Edited by *David G. Fairchild, MD, MPH*, and *Lorenzo Di Francesco, MD, FACP, FHM*

The American Diabetes Association has updated its 2005 guidance on preventing, treating, and managing the numerous forms of diabetic neuropathy.

Published in *Diabetes Care*, the statement emphasizes prevention, given that treatments for the associated nerve damage are lacking.

Among the many recommendations:

- In patients with type 1 or 2 diabetes, glucose control should be optimized early to prevent or slow the onset of distal symmetric polyneuropathy (DSPN), the most common form of diabetic neuropathy.
- Patients should be assessed for DSPN when type 2 diabetes is diagnosed and within 5 years after type 1 diabetes is diagnosed. After that, testing should be yearly. Testing entails history-taking, temperature or pinprick sensation, and vibration sensation using a 128-Hz tuning fork.
- For pain management, pregabalin or duloxetine should be considered as first-line therapy.

A New Psychosocial Treatment for Suicidality

Peter Roy-Byrne, MD reviewing Armitage CJ et al. Br J Psychiatry

In individuals recently hospitalized for self-harm behaviors, identifying self-harm triggers and potential responses reduced suicidal threats and attempts.

Individuals hospitalized for self-harm, regardless of suicidal intent, are at high risk for future suicide attempts. Few medications have specific antisuicidal effects, but now clinicians are developing psychosocial treatments to address the multiple powerful contextual factors contributing to self-harm. “Implementation intentions” (IIs) are a set of plans that identify trigger situations and formulate plans to counter them in an “if-then” fashion. They have been used successfully to treat other problem behaviors such as overeating and alcoholism. Now, researchers have randomized 226 patients recently hospitalized for self-harm to one of three interventions: unassisted IIs (patients generate their own plans), assisted IIs (patients use “help sheets” containing possible solutions), and a control (patients think about triggers and coping without forming IIs).

At least some suicidal measures decreased in all three groups at 3 months. However, both II conditions reduced suicidal ideation, compared with the control condition, with a medium effect size. Compared with the unassisted-II condition, the assisted-II condition reduced suicidal threats (medium effect size) and actual attempts (small effect size). A measure of self-efficacy showed no change, supporting a pre-existing theory that IIs work in an automatic, nonconscious manner.

COMMENT

This novel intervention, never before used to address self-harm behaviors and suicidal risk, reduced suicidal risk markers (ideation and threats) and actual attempts, with small-to-moderate effect sizes. Providing a help sheet that details possible strategies to cope with common suicidal triggers seems to increase the effectiveness of the intervention. The results are impressive because an active control, which caused some reduction in risk behaviors, was used as a comparator. As the authors wonder, might adding participation by a clinician further enhance these effects?

The Pharmacogenetic Tool Kit to Guide Depression Treatment Decisions?

Peter Roy-Byrne, MD reviewing Bousman CA and Hopwood M. Lancet Psychiatry

Commercially available tool kits are not yet ready for widespread adoption.

With the suboptimal response to many psychiatric treatments given by trial and error, clinicians and patients await the "personalizing" of treatment. Commercially available support tools for pharmacogenetic decision making are now being marketed to psychiatrists and, in the U.S., are reimbursed by some insurers. In an excellent review, these authors focus on tools offered by 22 companies.

The tools usually include multigene panels, based on single nucleotide polymorphisms, and are heavily focused on pharmacokinetic genes, less so on pharmacodynamic genes. For three support tools, published studies suggest improved clinical outcomes in depressed patients when prescribers follow the gene-based proprietary recommendations to prioritize the selection of specific medications. However, most studies were uncontrolled, and the combinatorial algorithms behind these recommendations were unpublished. Only a small number of included genes have been shown to singly have pharmacological implications. None of the tools included environmental factors potentially affecting therapeutic response or accounted for well-known ancestry effects.

COMMENT

This excellent review should be read by any psychiatrists wanting to use this kind of testing in their patients. In my own inspection of some of the published papers, the mean differences between groups had significant overlap, and no sensitivity or specificity analyses were provided. Although some clinicians may argue that such testing "can't hurt and might help," current psychopharmacological practice is complex, usually including combinations of multiple medications, and patients can have multiple comorbidities, both psychiatric and medical. Hence the meager available evidence, although promising, does not support routine use of these kits (although testing in some treatment-resistant patients might be reasonable). Even in medical specialties (e.g., oncology) that are much farther along in the understanding of genetic factors in illness pathophysiology, genetic testing to guide treatment is still in its infancy.

Characteristics of Young Children Who Die by Suicide

Barbara Geller, MD reviewing Sheftall AH et al. Pediatrics

Children aged 5 to 11 years used adult-type methods of suicide (e.g., hanging) and were more likely to be black and male than older children who died by suicide.

Counterintuitively, even children as young as 3 years express suicidality (e.g., tying a belt around their neck and stating a death wish; J Am Acad Child Adolesc Psychiatry 2015; 11:926). But little is known about the characteristics of children aged 5 to 11 years who die by suicide. Here, investigators analyzed registry data from 17 states on children who died by suicide; 87 were aged 5 to 11, and 606 were aged 12 to 14.

Compared with children in the older group, those in the younger group were more likely to be black and male, to die by asphyxiation (e.g., hanging), and to not leave a note. Overall, 29% had told someone about their intent. Symptoms of attention-deficit hyperactivity disorder (ADHD) were more frequent than depressive symptoms in the younger group (59% vs. 29%); the reverse was seen in the older group (33% vs. 66%).

COMMENT

Study limitations (lack of research interviews of family members, no control group, and no examination of protective services records) precluded establishing a full diagnostic or abuse picture. Without a control group, the researchers could not examine differences in diagnoses between these children and nonsuicidal children. However, several factors bolster the validity of these findings. First, the frequency of ADHD in the younger group is consistent with ADHD rates in suicidal preschoolers. Second, the depression rate among the early adolescents is compatible with findings in other studies of adolescents who died by suicide. Clinicians should ask children about death wishes, because youngsters usually do not provide this information spontaneously. Also, children should be interviewed without a caretaker because they may otherwise be reluctant to divulge suicidal information. Guilt-ridden depressed children fear hurting their parents' feelings; abused youngsters are afraid of worse maltreatment.

International Medical Graduates Seem to Perform At Least as Well as U.S.-Trained Physicians

By Kelly Young

Edited by André Sofair, MD, MPH, and William E. Chavey, MD, MS

Hospitalized patients in the U.S. who are treated by attending physicians who received their medical training abroad fair just as well — and in some cases better — than those treated by domestically trained physicians, suggests a study in The BMJ.

The authors examined data on 1.2 million Medicare beneficiaries who were admitted from 2011 to 2014 and treated by 44,000 general internists. Roughly 44% of the internists were international medical graduates.

After multivariable adjustment, patients of international medical graduates had significantly lower 30-day mortality rates than those of U.S. graduates (11.2% vs. 11.6%). The mortality differences were similar across numerous clinical conditions. However, international graduates had higher costs of care ($1145 vs. $1098). Readmission rates were similar between the groups.
The authors write: "Taken together, our findings should reassure policymakers and the public that our current approach to licensing international medical graduates in the US is sufficiently rigorous to ensure high quality care."

Mild Cognitive Impairment

Authors

Sonal Mehta, MD and Colleagues

Practice Essentials

In mild cognitive impairment (MCI), the changes in cognition exceeds the normal, expected changes related to age. In one classification of MCI, the amnestic form is distinguished from the nonamnestic form. The amnestic form often precedes Alzheimer disease.

Signs and symptoms

Symptoms of mild cognitive impairment (MCI) are often vague and include the following:

- Memory loss
- Language disturbance (eg, difficulty in finding words)
- Attention deficit (eg, difficulty in following or focusing on conversations)
- Deterioration in visuospatial skills (eg, disorientation in familiar surroundings in the absence of motor and sensory conditions that would account for the complaint)

Ronald C. Petersen postulated that the defining element of MCI is a single sphere of slowly progressive cognitive impairment that is not attributable to motor or sensory deficits and to which other areas of involvement may eventually be added, before social or occupational impairment supervenes (because this occurrence marks the onset of dementia).

Diagnosis

Although no single feature of the general physical examination characterizes MCI, the following should be included in the overall assessment of the patient:

- Evaluation of mental status
- Examination for the presence of potential causative comorbid conditions
- Examination for the presence of sensory and/or motor deficits as potential causes or exacerbating factors

No specific diagnostic studies exist for mild cognitive impairment. However, most clinicians perform a basic workup at minimum to exclude potential treatable causes (eg, thyroid disease, cobalamin deficiency). Research is ongoing in the search for biologic markers that may help differentiate between the large number of conditions that may progress from MCI to full dementia.

Brain imaging with magnetic resonance imaging (MRI) or computed tomography (CT) is often performed in patients with MCI. In general, MRI is preferred, as whole brain and hippocampal volume on MRI can predict progression from MCI to Alzheimer disease (AD). However, there are no established parameters to integrate this finding into the routine diagnosis and management of MCI. In addition, there is also some preliminary evidence for the use of baseline FDG-PET of the brain in conjunction with episodic memory assessment to predict conversion to AD.

There are no stipulated neuropsychological tests for patients with MCI, nor are there predetermined cutoff points (eg, 1.0, 1.5, or 2 standard deviations below the mean). However, clinicians use the results from standardized memory and cognitive tests to determine whether these data represent significant changes from a patient's presumed baseline. In general, serial testing is required to establish whether the patient's cognitive function is improving, staying stable, or progressing to full-blown clinical dementia.

Alzheimer's Association recommendations

The Alzheimer's Association guidelines, including an algorithm, help clinicians in the primary care setting detect cognitive impairment and determine whether referral or further testing is needed. The algorithm includes the following components:

- Review of patient health risk assessment (HRA) information
- Patient observation
- Use of unstructured queries
- Use of structured cognitive assessment tools for patients and informants

The following 3 cognitive assessment tools are recommended for routine use by primary care physicians:

- General Practitioner Assessment of Cognition (GPCOG)
- Mini-Cog
- Memory Impairment Screen (MIS)

Additionally, the Alzheimer's Association recommends the following 3 cognitive assessment tools for use with the patient's spouse, family, or friends:

- Informant General Practitioner Assessment of Cognition (informant GPCOG)
- AD 8-Question Screen (AD8)
- Short Informant Questionnaire on Cognitive Decline in the Elderly (short IQCODE)

Management

Although no established treatment exists for MCI, donepezil delays the progression to AD in MCI patients with depression without affecting their depressive symptoms, and some evidence

suggests that cognitive interventions may have a positive effect. Cholinesterase inhibitors have not been found to delay the onset of AD or dementia in MCI.
Identify and monitor patients with MCI, because of their increased risk for AD (and, to a lesser extent, other dementing conditions). In addition, to the extent possible, correct any sensory and motor manifestations that compound their cognitive symptoms.
Diet and activity may have some positive effects in patients with MCI. The risk of developing MCI is lower in individuals who consume a Mediterranean diet, and interactive, mentally challenging activities as well as moderate exercise have the potential to be helpful in MCI.

Overview

Various terms have been employed to characterize the cognitive decline associated with aging, including benign senescent forgetfulness, age-associated memory impairment, and age-associated cognitive decline. The term mild cognitive impairment (MCI) is intended to represent an intermediate stage between normal aging and the development of pathologic aging and dementia (eg, malignant senescent forgetfulness).
Other terms with connotations similar to those of MCI include isolated memory impairment, incipient dementia, and dementia prodrome. However, these terms are not nearly as widely accepted as MCI and should not be considered exact synonyms.
Of the normal memory functions, some decline substantially with increasing age, and some do not. Memory functions that remain relatively stable with increasing age include the following:

- Semantic memory - Facts and general knowledge about the world; although this function generally remains stable with age, especially if the information is used frequently, retrieval of highly specific information (eg, names) typically declines
- Procedural memory – Acquisition and later performance of cognitive and motor skills

Memory functions that decrease with age include the following:

- Working memory - Holding and manipulating information in the mind, as when reorganizing a short list of words into alphabetical order; verbal and visuospatial working speed, memory, and learning, with visuospatial cognition more affected by aging than verbal cognition
- Episodic memory – Personal events and experiences
- Processing speed
- Prospective memory – The ability to remember to perform an action in the future (eg, remembering to fulfill an appointment or take a medication)
- Ability to remember new text information, to make inferences about new text information, to access prior knowledge in long-term memory, and to integrate prior knowledge with new text information
- Recollection

To demonstrate that a patient's cognitive function is worse than would normally be expected for his or her age, neuropsychological testing is necessary so that the patient's performance can be compared with that of an age-matched (and, ideally, education-matched) control group.

Mild degrees of cognitive impairment, particularly when self-reported by patients, pose a substantial challenge to the clinician. The physician may be dealing with a patient with a mild or transient condition, a drug-induced adverse effect, or a depressive disorder; the patient may be in the early stages of a condition that will eventually lead to a dementia; or the complaint may be due to a psychological condition rather than an organic brain disorder.

Because a variety of conditions may result in a complaint of cognitive impairment, an individualized workup for such conditions and a consensus on a therapeutic approach should be sought. To date, no medications have been approved by the US Food and Drug Administration (FDA) for the treatment of MCI.

For patient education resources, see the Dementia Center, as well as Possible Early Dementia.

Pathophysiology

In mild cognitive impairment (MCI), cognitive impairment exceeds the normal expected age-related changes, but functional activities are largely preserved; thus, MCI does not meet the criteria for dementia. Different subtypes of MCI are recognized. One common classification distinguishes between amnestic and nonamnestic forms of MCI.

Amnestic MCI, in which memory impairment predominates, is often a precursor of clinical Alzheimer disease (AD). Nonamnestic forms of MCI are characterized by a variety of cognitive impairments, the most common of which is probably impaired executive function. A substantial number of patients with MCI may be judged to have normal cognition on follow-up visits.

The pathophysiology of MCI is multifactorial. Most cases of amnestic MCI result from pathologic changes of AD that have not yet become severe enough to cause clinical dementia. At least in specialty research populations, autopsies done on amnestic MCI patients have found the neuropathology to be typical of AD. Nonamnestic MCI may be associated with cerebrovascular disease, frontotemporal dementias (as a precursor), or no specific pathology.

Etiology

Mild cognitive impairment (MCI) is heterogeneous both in its clinical manifestations and in its etiology. Given that amnestic MCI often results from Alzheimer disease (AD) pathology, it is not surprising that most patients with amnestic MCI progress to clinical AD within 6 years. Nonamnestic forms of MCI may be due to cerebrovascular disease, Lewy body dementia, Parkinson disease, frontotemporal dementias, atypical Alzheimer disease, or no specific underlying pathology.

Mood disorders, medical illness, and medications may affect cognition in such a way that a patient will meet criteria for MCI (usually nonamnestic MCI). Many such patients have normal neuropsychological test results when reevaluated a year later.

According to a large population-based study conducted in 2016, there is no significant link between exposure to general anesthesia and the development of MCI in individuals aged 40 years and older. Anesthesia exposure, assessed as a dichotomous variable, was not associated with MCI nor was there was a link between the number of anesthesia exposures and MCI. A study in 2013 also had similar findings; those results showed exposure to general anesthesia during medical procedures after age 45 years is not a risk factor for dementia. However, these data do not exclude the possibility that anesthetic exposures occurring later in life may be associated with an increase in the rate of incident MCI.

Epidemiology

Annual prevalence estimates for mild cognitive impairment (MCI) range from 12% to 18% in persons older than 60 years, a finding reflected in multiple international studies. Among community-dwelling African Americans, the estimated prevalence is 19.2% for those aged 65-74 years, 27.6% for those aged 75-84 years, and 38% for those aged 85 years and older.

The prevalence of mild cognitive impairment increases with age. The prevalence is 10% in those aged 70-79 years and 25% in those aged 80-89 years. Many studies indicate that the risk of Alzheimer disease (AD) is significantly higher in women than in men, and it is therefore presumed that the likelihood of developing MCI is greater in women than in men. Virtually nothing is known about cultural and racial factors influencing the clinical manifestations of MCI.

Clinical Presentation

Patient history

Patients with mild cognitive impairment (MCI) often present with vague and subjective symptoms of declining cognitive performance, which may be difficult to distinguish from the typical performance decline in healthy older individuals. The most common symptom is said to be memory loss, in keeping with the prevalent view that amnestic MCI is the most common type. However, some authorities affirm that the most common form of MCI affects multiple spheres of cognition.

Less common presentations of MCI include language disturbance (eg, difficulty in finding words), attention deficit (eg, difficulty in following or focusing on conversations), and deterioration in visuospatial skills (eg, disorientation in familiar surroundings in the absence of motor and sensory conditions that would account for the complaint).

Dissociating purely cognitive symptoms from those attributable to various degrees of sensory deprivation (eg, hearing loss or loss of visual acuity) that tend to coexist in the same patient population is often difficult and may be compounded by motor deficits that also beset the same individuals.

In any case, the defining element of MCI, as postulated by Petersen, is a single sphere of slowly progressive cognitive impairment that is not attributable to motor or sensory deficits and to

which other areas of involvement may eventually be added, before social or occupational impairment supervenes (because this occurrence marks the onset of dementia). Virtually nothing is known about the average duration of these manifestations before they are brought to medical attention (if they ever are).

Clinicians should rely on their own judgment in deciding when safety-related questions that are appropriate for patients with dementia—for example, about weapons, driving, and possible home fires involving cigarettes, stoves, or fireplaces—should also be asked of patients with MCI.

Physical examination

No feature of the general physical examination is characteristic of MCI. Nevertheless, a thorough physical examination should be performed as part of the general evaluation in an effort to determine whether any conditions capable of causing MCI (eg, thyroid disease, cobalamin deficiency, or venereal disease) are present and whether there are any sensory and motor deficits that could explain or compound the symptoms. Mental status examination is also important for documenting the degree of cognitive dysfunction.

Differential Diagnosis

Mild cognitive impairment (MCI) may result from virtually any disorder that causes brain dysfunction. Common causes include the following:

- Alzheimer disease (AD)
- Cerebrovascular disease
- Parkinson disease
- Frontotemporal degenerations
- Thyroid disease
- HIV infection
- Depression
- Metabolic and endocrine disease
- Adverse central nervous system effects of drugs and toxicants
- Cerebral infection
- Traumatic brain injury
- Cognitive adverse effects of sleep disorders
- Cobalamin deficiency
- Chronic psychological stress

According to an analysis of 5150 patients aged 65 years or older from the Cardiovascular Health Study, patients with atrial fibrillation (AF) reach clinical thresholds for cognitive impairment and dementia at an earlier age than patients without AF, even in the absence of clinical stroke.

Depressive disorders are particularly prevalent in older adults (approximately 15%), who frequently exhibit vague somatic symptoms and anxiety and report inability to concentrate and

poor memory. These patients typically deny a sad mood but often admit to sleep symptoms, lack of interest in things they used to enjoy, loss of appetite, and lack of motivation. Depression may certainly be accompanied by cognitive dysfunction that abates with successful treatment of the depression.

The association between depression and AD and other dementias is likely to be complex, and depression may be misdiagnosed in the realm of dementia. Framingham data have helped bolster the epidemiologic association, documenting a 50% increase in AD and dementia in those who were depressed at baseline. During a 17-year follow-up period, a total of 21.6% of participants who were depressed at baseline developed dementia, compared with 16.6% of those who were not depressed.

In another related study, recurrent depression was noted to be particularly pernicious: having 1 depression episode conferred an 87-92% increase in dementia risk, whereas having 2 or more episodes nearly doubled the dementia risk (but did not increase the risk of incident MCI).

Laboratory Studies

No specific laboratory studies are indicated for mild cognitive impairment (MCI). Most practitioners perform at least a basic workup to rule out treatable conditions that may cause dementia, such as thyroid disease and cobalamin deficiency. These assessments are not mandatory, however.

A search for biologic markers of MCI that may help distinguish among the many conditions that lead from MCI to full-blown dementia is ongoing. As yet, however, no unanimous agreement has been reached, and potentially useful markers, such as functional and structural abnormalities found on imaging studies (eg, hippocampal atrophy and cerebral hypoperfusion) and putative biochemical markers (eg, apolipoprotein E epsilon 4 allele), remain controversial.

Imaging Studies

No specific laboratory studies are indicated for mild cognitive impairment (MCI). Most practitioners perform at least a basic workup to rule out treatable conditions that may cause dementia, such as thyroid disease and cobalamin deficiency. These assessments are not mandatory, however.

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Neuropsychological Testing

Neuropsychological testing is required in instances of mild cognitive impairment (MCI) to demonstrate that the patient is below some cutoff point on standardized memory tests (as well as other cognitive tests). However, the exact cutoff point (be it 1.0, 1.5, or 2 standard deviations below the mean) and the particular neuropsychological tests to be used are not stipulated.
Because few MCI patients have undergone baseline testing on these measures before the onset of the impairment, the clinician will have to determine whether a particular score represents a significant change from a patient's presumed baseline. Such determinations are inexact, and serial testing eventually will be needed to establish whether the patient's cognitive function is improving, staying stable, or progressing to full-blown clinical dementia. A useful aspect of this testing is the ability of the neuropsychologist to establish a profile for the patient based on their gender, age, and education, and to then evaluate if their level of function is adequate for that profile.
The Alzheimer's Association released guidelines, including an algorithm, to help clinicians in the primary care setting detect cognitive impairment and determine whether referral or further testing is needed. The algorithm includes the following components:

- Review of patient health risk assessment (HRA) information
- Patient observation
- Use of unstructured queries
- Use of structured cognitive assessment tools for patients and informants

The following 3 cognitive assessment tools are recommended for routine use by primary care physicians:

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- AD 8-Question Screen (AD8)
- Short Informant Questionnaire on Cognitive Decline in the Elderly (short IQCODE)

Treatment & Management

Medical care

At present, no established treatment exists for mild cognitive impairment (MCI). Cholinesterase inhibitors have not been found to delay the onset of Alzheimer disease (AD) or dementia in

individuals with MCI; however, donepezil has been found to delay the progression to AD in MCI patients with depression without affecting their symptoms of depression. There is some evidence to suggest that cognitive interventions may have a positive effect.

A practice parameter recommendation by the American Academy of Neurology states that patients with MCI should be identified and monitored because of their increased risk for AD and, to a lesser extent, other dementing conditions. Obviously, correcting (to the extent possible) any sensory and motor manifestations compounding the cognitive symptoms is important for minimizing their impact on MCI.

Particular attention should be given to the need to make a legal statement about the competency of patients to handle their own affairs. Because patients with MCI are by definition not demented, they usually do not need to assign power of attorney to anyone else—unlike patients with AD, who eventually will need such help.

The results of a study that included 361 subjects with AD, vascular dementia, or mixed dementias suggested that centrally acting angiotensin-converting enzyme inhibitors (CACE-Is) may reduce the rate of cognitive decline in patients with dementia, regardless of blood pressure levels at the time of their hypertension diagnosis. The rate of cognitive change was slowed in the first 6 months after dementia patients started taking these drugs.

Diet

Roberts et al found that the risk of developing MCI is lower in individuals who consume a Mediterranean diet, which is high in vegetables and unsaturated fats.

A randomized, double-blind, placebo-controlled trial involving 25 elderly subjects with MCI determined that dietary supplementation with an oily emulsion of docosahexaenoic acid (DHA)-phospholipids containing melatonin and tryptophan yielded significant improvements in several measures of cognitive function as compared with supplementation with the placebo.

Activity

Because physical, social, and mental activity are often recommended for patients with AD and because MCI often heralds AD, many experts have suggested that mentally challenging activities (eg, crossword puzzles and brain teasers) may be helpful for patients with MCI. Although there is no definitive proof that these exercises are efficacious, recommending them to patients with MCI seems advisable.

Such exercises should be kept to a level of difficulty that is reasonable for the patient. Ideally, they should be interactive rather than passive, and they should be administered in a fashion that does not cause excessive frustration. If an activity is not enjoyable or stimulating for the patient, it is unlikely to offer much cognitive benefit. In such cases, searching for other similar cognitive activities may be beneficial.

Social isolation can be minimized through referral to senior community centers or a day treatment program. Cognitive retraining and rehabilitative strategies offer considerable promise in MCI and are therefore being explored.

A growing body of evidence suggests that physical activity and exercise are beneficial for brain health. A prospective study suggested that engaging in moderate exercise of any frequency in midlife or late life was associated with reduced odds of having MCI. According to one study, aerobic exercise was associated with a slight improvement in cognition.

Another study showed certain activities to lower risk of MCI in cognitively normal individuals older than 70 years. These included playing games, reading magazines, being engaged in crafts, computer use, and social activities. Among these, being social and using computers were shown to reduce risk of MCI in people who were APOE4 carriers as well.

Prognosis

Many patients with mild cognitive impairment (MCI) eventually experience progressive deterioration in their abilities to perform activities of daily living, cognition, and behavior.

Subtypes of MCI progress to Alzheimer disease (AD) at different rates. A study by Rountree et al showed that the conversion rate to AD was 56% for amnestic MCI, 50% for amnestic-subthreshold MCI, and 52% for nonamnestic MCI. For all MCI subtypes, the 4-year conversion rate to dementia was 56% (14% annually), and that to Alzheimer disease was 46% (11% annually).In comparison, healthy elderly individuals develop AD at a rate of 1-2% per year.

Boyle et al reported that patients with MCI are almost 7 times more likely to develop AD than are older individuals without cognitive impairment. Of patients with MCI, 80% are said to progress to dementia after approximately 6 years. This is a significant finding, given that AD is often cited as the fourth leading cause of death in the United States.

At least one well-designed study has shown MCI, as identified by the Short Portable Mental Status Questionnaire, to be an independent predictor of mortality. Wilson et al reported that in both African American and white patients, the risk of death was increased by about 50% among individuals with MCI and was nearly 3 times higher among those with AD.

Ultimately, long-term follow-up and eventual autopsy are necessary to distinguish between patients experiencing MCI due to preclinical AD and patients experiencing MCI due to less frequently occurring conditions. However, there are some factors that can be helpful in predicting the likelihood of progression.

The severity of memory impairment is predictive of progression to AD: patients with more severe memory impairment are more likely to progress. There are certain neuroradiologic features that predict progression of MCI. These include MRI findings of atrophy and volume loss in the medial temporal lobe as well as a hypometabolic pattern on FDG-PET scan. In addition, APOE4 genotype carriers are at higher risk of progression, but APoE4 testing is not recommended for routine use. A new modality that might prove useful in predicting and monitoring progression of MCI is a new PET tracer focusing on the role of tau. Early data

suggests that spread of tau laterally, outside the medial temporal lobe, may predict a poor prognosis and a more rapid progression.

Mind-Body-Spirit Interventions for Patients With PTSD

SIGNIFICANCE FOR THE PRACTICING PSYCHIATRIST

Mind-body-spirit (MBS) methods provide integrated approaches to psychophysiological self-regulation and promote self-care behaviors. When stigma about mental health care exists, MBS methods may be especially useful because they engage the somatic and spiritual narrative as a pathway to the psyche.

- Chronic illnesses and autoimmune disorders occur at higher rates in people with PTSD.
- Botanical therapies used to address symptoms of PTSD include cannabis, kava, and St John's wort.
- The DSM-5 Cultural Formulation provides modules designed to elicit information on the use of MBS methods and traditional cultural practices.

SIGNIFICANCE FOR THE PRACTICING PSYCHIATRIST

By Leslie Korn, PhD, MPH

PTSD is the quintessential mind-body-spirit (MBS) disorder that alters physiological, biological, and psychological homeostasis. People with PTSD and complex trauma often experience dysregulation of multiple systems that impairs physical, affective, and cognitive function, which can lead to a profound sense of disconnection from others and loss of purpose and hope.

Dissociation is common in PTSD and is associated with disabling sequelae, including substance abuse, self-harming behaviors, eating disorders, and chronic pain. In his analysis of the whiplash model of pain, Scaer suggests that the chronic pain syndrome that results from minor motor vehicle accidents does not correspond with the actual events—that it more likely represents dissociated memory that was laid down at the time of impact because of intense fear. Chronic illnesses and autoimmune disorders, such as rheumatoid arthritis, multiple sclerosis, lupus, and inflammation of the thyroid; digestive disorders, such as GERD and microbiome imbalance; diabetes; cardiovascular disease; and mitochondrial illnesses, such as chronic fatigue syndrome and fibromyalgia, all occur at higher rates in persons with PTSD.

MBS methods provide integrated approaches to psychophysiological self-regulation and promote self-care behaviors. These methods facilitate deep rest, help to reset circadian rhythm, and release endogenous opioids and cannabinoids that lead to a reduction in anxiety and an enhanced

sense of well-being. Some may also offer a strategy (meditation, chanting, aerobic exercise, hot yoga) to gain awareness and control over the dissociative process. Relaxation techniques (eg, breathing exercises, guided imagery, progressive muscle relaxation) and energy psychology (eg, tapping, tai chi, qi gong) are practical and beneficial methods that are easily incorporated into daily routines.

Botanical therapies may be used to address symptoms of PTSD, most notably cannabis, kava, and St John's wort. Touch therapies, animal-assisted therapies, and group rituals are used to facilitate a complex psychobiological response that may improve the capacity for attachment through structured affective and sensory engagement with other caring beings. Group spiritual rituals and entheogenic (ie, psychedelic) rituals emphasize transpersonal approaches to engender self-compassion and meaning-making as the patient reevaluates his or her place in the cosmos following traumatic events.

MBS approaches

MBS beliefs and methods should be identified and prioritized during assessment and treatment when working with recent immigrants, refugees, indigenous populations, or people for whom cultural/ethnic identity may be significant. When stigma about seeking mental health care exists, MBS methods may be especially useful because they engage the somatic and spiritual narrative as a pathway to the psyche. The DSM-5 Cultural Formulation Interview provides modules designed to elicit information on the use of MBS methods and traditional cultural practices using a person-centered approach.

Research on recreational, adventure, and nature-based therapies for PTSD—while promising—is inconclusive. Yet these therapies may be valuable for their combination of physical exercise, the exposure to the light/dark cycles of natural light that entrain circadian rhythm, and the opportunity to share nature with others.

Animal-assisted therapies

Animal-assisted and equine therapies show a diverse range of results and offer techniques to harness the human-animal bond. Equine therapies provide for physical rehabilitation with riding, grooming, and trust building via the "affective mirror" that horses reflect back to humans. In some equine programs, veterans help rehabilitate horses that have been wounded and traumatized, leading to awareness of their own "wounded-healer" identity to be used as a pathway to mutual helping and healing.

Canine animal assistants help reduce anxiety in sexual abuse survivors and rape victims. Animal-assisted therapies renew the capacity to develop attachment, to tolerate sensation and pleasure, and to give and receive non-sexual, caring touch through physical contact.

Entheogens

MBS rituals increasingly incorporate entheogens for the treatment of PTSD and its sequelae. Entheogens have been incorporated into psychotherapy and other rituals to treat anxiety and PTSD and to access a transcendent state in order to potentiate radical change. Promising results have been seen with entheogen- assisted psychotherapy for the treatment of PTSD and substance abuse, including the use of ayahuasca, psilocybin, lysergic acid diethylamide (LSD), N,N-dimethyltryptamine (DMT), iboga, and 3,4-methylenedioxymethamphetamine (MDMA).

Bodywork, massage, and somatic therapies

Considering the experience of somatic distress in PTSD, it is understandable why many people explore alternative interventions. Some bodywork therapies emphasize deep relaxation, while others incorporate guided imagery and psychotherapeutic exchange during massage or somatic awareness exercises.

Massage techniques range from a very light touch to a deep touch. Some use only pressure points; others use oil, rocking, stretching, petrissage, and cross-fiber friction with the patient either clothed or unclothed and draped. At least moderate pressure is required to stimulate vagal activity and induce parasympathetic response.

Massage controls pain severity through its effects on both physical and psychological symptoms. A significant reduction of PTSD symptoms has been seen in veterans after massage therapy. Moreover, findings suggest a reduction of substance abuse, anxiety, stress, depression, and dissociation. A community-based study with trauma survivors found significant improvement in the domains of interpersonal safety, interpersonal boundary setting, bodily sensation, and bodily shame in response to massage and energy-based therapies.

CASE VIGNETTE

John was arrested during the Chicago riots of 1968 and was raped in the holding cell while he awaited release. For decades, he suffered from chronic constipation, hemorrhoids, and anal sphincter spasms, which led to long-term use of muscle relaxants and anxiolytics. He sought relief of his symptoms and alternatives to medication. Following psychoeducation using progressive muscle relaxation and guided imagery, he undertook a series of treatments that involved gentle massage of the perineal muscles while engaging in psychotherapeutic dialogue to decondition from intrusive imagery and muscular contraction. He experienced acute relief from painful spasms, and his condition improved over time as he practiced relaxation methods. He sought treatment occasionally as needed. He was able to stop using medication.

Body-centered psychotherapy is conducted by dual-trained clinicians and combines touch and psychotherapy as a process-oriented technique. It may also serve as exposure therapy, in which the body-mind is contacted in order to decondition autonomic hyperarousal associated with

somatic memories. Energy freedom techniques include self-touch, during which the patient "taps" on specific acupuncture points while recalling intrusive memories. Some methods (eg, somatic experiencing) focus on a non-touch approach to facilitating patient awareness of his or her interoceptive, kinesthetic, and proprioceptive experience.

Acupuncture

Traditional Chinese needle insertion along meridians, electro-acupuncture, and auricular acupuncture are widely used for the treatment of PTSD symptoms. Systematic reviews of acupuncture for PTSD show results ranging from positive to mixed. Both body and auricular acupuncture reduce the severity of withdrawal symptoms associated with rapid opiate detoxification, increase participation rates of patients in long-term treatment programs, and reduce cravings and relapse.

Of particular clinical interest for PTSD are 5-element acupuncture, a method that actively incorporates a spiritual and emotional approach, and Japanese-style acupuncture that uses very light needle insertion, which is ideal for young children, the elderly, and needle-sensitive individuals. The National Acupuncture Detoxification Association protocol is also a widely used, 5-point auricular protocol for substance abuse recovery that is often applied to large numbers of individuals concurrently in community-based settings and in war zones, in refugee camps, and during disasters. Lay acupuncture practitioners are approved to provide this protocol in many states under medical supervision, making this a convenient adjunct to residential and out-patient behavioral health care delivery. The practice of acupuncture also includes the application of moxibustion, the burning of the herb Artemisia vulgaris on or near acupuncture points.

Assessment

Some patients prefer acupuncture, while others prefer touch therapies. Many choose to experience both but at different stages in their recovery. Evaluation for an acupuncture or touch therapy referral should include assessment for the meaning of penetration by needles for survivors who are victims of "penetration" and also the meaning of touch and the type of touch engendered by tactile proximity. Touch can engender a preverbal state reminiscent of early attachment that "needling" does not. This may be beneficial at one stage or frightening at another. Clinician gender also plays an important role in the choice of referral, and the patient may want a therapist in the room during the initial sessions in order to feel safe.

Breathing and yoga

Hyperventilation and breathing pattern disorders are common in PTSD and have a bi-directional effect on anxiety. Approximately 11% of the general US population use breathing exercises and 10% practice yoga. Breathing exercises are a well-established part of trauma-informed cognitive behavioral therapy, dialectical behavioral therapy, and mindfulness meditation.

Breath has long been considered to be the link between mind, body, and spirit. Yoga scholars suggest that if "you control the breath you control the mind." Different methods that demonstrate efficacy include Pranayama, Kundalini, and Kriya yoga. These techniques vary by how they alter the nasal cycle, which correlates to the physiological states of rest and activity. Greater airflow in the left nostril reflects the resting phase, and greater airflow in the right nostril correlates with the activity phase. Forcing the breath through only one nostril stimulates the contralateral hemisphere and ipsilateral sympathetic nervous system via the hypothalamus. Research on yoga breathing for PTSD shows a reduction of symptom severity, depression, and risk of alcohol and drug use.

Hatha yoga incorporates physical movements, focus, and attention, along with methods that control breath. A PTSD-informed Hatha yoga model is a safe and effective adaptation to address the specific needs of patients. Hatha yoga increases perceived self-efficacy in women with PTSD. The frequency of yoga practice is a predictor of decrease in depressive and PTSD symptoms and suggests the value of incorporating yoga practice into an ongoing, self-care program.

Conclusion

Patients with PTSD often present with the daily distress of intractable psychosomatic symptoms. Many of these individuals do not seek psychotherapy or pharmacotherapy. Indeed, they often search for MBS alternatives. Although patients will self-treat using an MBS intervention, they will not necessarily share this information with their clinicians unless asked specifically. Asking about self-medication increases patient safety, especially regarding drug-nutrient-herb interactions, and suggests the importance of exploring self-care and self-prescribing practices during the initial intake.

The central clinical challenge to effective application of MBS therapies is to identify methods that are isomorphic to the individual and optimal for his or her stage of recovery. Options for implementation of MBS methods include in-office psychoeducation such as teaching breathing exercises, offering the development of 12-week MBS groups to practice these methods or rituals, or referral to specific classes or practitioners. Effective clinical implementation of MBS methods addresses religious and cultural beliefs and socioeconomic barriers.

Hyponatremia in Older Patients Who Begin Second-Generation Antidepressants

Allan S. Brett, MD reviewing Gandhi S et al. Am J Kidney Dis

Excess risk for hyponatremia at 30 days was small but statistically significant.

So-called second-generation antidepressants have been associated with hyponatremia, attributed to the syndrome of inappropriate antidiuretic hormone (SIADH). In this population-based Canadian study, researchers used several Ontario databases to estimate short-term risk for hyponatremia in older adults (age, ≥65) who were diagnosed with mood or anxiety disorders and received first prescriptions for citalopram, escitalopram, fluoxetine, paroxetine, fluvoxamine, venlafaxine, duloxetine, mirtazapine, or sertraline. Propensity-score matching identified 138,000 patients who were started on one of these drugs and 138,000 clinically and demographically similar patients who did not receive them.

The 30-day incidence of hospitalization with hyponatremia listed among discharge diagnoses was significantly higher in the antidepressant group than in the control group (0.33% vs. 0.06%). In a subpopulation for which in-hospital lab results could be linked to other data, the incidence of hospitalization with serum sodium levels <132 mEq/L also was significantly higher in the antidepressant group (1.74% vs. 0.43%).

COMMENT

Older patients who begin use of second-generation antidepressants appear to have a small but statistically significant excess risk for hospitalization with hyponatremia during the month after starting such drugs. The extent to which hyponatremia was a contributing reason for hospitalization (as opposed to a clinically unimportant incidental finding) cannot be determined from this study.

Suicidal Patients: Defining and Addressing Emergencies

By Patrick T. Triplett, MD

Patients can arrive in an emergency department (ED) for suicide assessment via a number of different routes. Some come in on their own or are brought in voluntarily. Others are brought against their will on behalf of concerned providers, friends, family, or police.

Once a patient has arrived, the duty of ED clinicians is to understand the potential for suicide and to formulate a plan to help mitigate risk. A busy ED triage is not the place for exhaustive psychiatric histories and assessments; however, triage nurses or other clinicians can quickly determine whether a patient needs a more thorough assessment. Screening assessments tend to be shorter and simpler than more exhaustive clinical assessments and generally have high sensitivity.

A major concern with ED suicide screening tools is the challenge of achieving acceptable sensitivity and specificity. Basic screening assessments for suicidality may alert non-psychiatric clinicians to a patient's need for further psychiatric assessment and/or treatment. This article reviews some of the issues related to assessment of patients for suicide risk in the ED, and discusses emerging approaches and research that one day will lead to more reliable assessment and interventions that are based more on science than on art or luck.

CASE VIGNETTE 1

Mr. R is a 64-year-old former pipefitter who is receiving disability benefits for stage IV COPD. He is brought to the ED by a staff member at his internist's office. Mr. R is oxygen-dependent but continues to smoke and has been noncompliant with using his oxygen tank. He saw his internist today for a refill of narcotic medication for low back pain.

His internist had suggested an antidepressant in the past, but Mr. R repeatedly refused. During today's visit, he was given a version of the Patient Health Questionnaire–9 and scored positively on the last question, which focuses on wishes for death and suicidal thoughts. Further questioning by his internist revealed that Mr. R had concerns about being able to walk only short distances without having to stop to catch his breath; he also fears that he will no longer be able to walk his beloved dog.

He has a passive death wish and some suicidal thoughts, including that he "might" shoot himself in the head if his physical condition worsens, but says he "probably" wouldn't do it. He has 2

firearms at home, lives alone, and has few friends. His doctor fears that Mr. R minimizes the amount and frequency of his drinking.

Mr. R has been divorced for over 10 years and is estranged from his children and grandchildren. He had grudgingly agreed to be escorted to the ED by clinic staff for further assessment, but on arrival he is already demanding to leave.

Assessment of suicide risk

The ED can be an exciting and stimulating environment and a great place for education and training. It can also be challenging and sometimes humbling, with too-frequent reminders of how limited our predictive powers can be. The first case vignette includes a number of factors that must be juggled at once: a seemingly high risk of suicide, possible untreated depression and suspicion of alcohol misuse, few family or other social supports, medical comorbidity, and a patient who is unwilling to be treated or even assessed.

Suicide risk assessment can involve life-or-death decisions, often based on information that is likely to be incomplete. Clinicians make decisions based on information from patients whom they have often just met. These critical decisions are based on available history and data; knowledge of epidemiologic, clinical risk, and protective factors for suicide completion; a clinical assessment; and whatever information the patient and collateral informants are able and willing to divulge as part of the clinical examination.

Working in a busy ED without the benefit of more extensive training, clinicians may reflexively categorize patients being assessed for suicide, using their own experience and hunches as guides.

Suicide screening and risk assessment tools may be useful adjuncts to a clinical examination, but they are not an adequate replacement for patients at elevated risk. There are a number of tools for suicide screening or assessment with varying degrees of complexity, ranging from 1 or 2 straightforward questions to more complicated instruments with cascading questions and decision points based on patient responses or other findings. Some may tabulate a score or a range (eg, high, medium, low) of risk and may even have recommendations for treatment options for each score or range. Systematic assessment of suicide risk is important, and clinicians may want to “develop their own systematic risk assessment methods based on their training, clinical experience, and familiarity with the evidence-based psychiatric literature.” The Substance Abuse and Mental Health Services Administration’s SAFE-T3 guide provides an example of a format for working up suicide risk, though it must be tailored to the patient and situation.

Once a suicide attempt or ideation has been revealed, clinicians must delve further with questions about the patient’s suicide plans, including lethality, intent, means, stage of planning, and any details of previous attempts. Guides such as the Beck Suicidal Intent Scale help gauge

the seriousness of an attempt and may help elicit details of plans and intention but should still be nested within a more extensive work-up.

There is no established gold standard for assessment, although there are a number of practice guidelines, such as "Caring for Adult Patients With Suicide Risk: A Consensus Guide for Emergency Departments," which is specific to the ED setting. This guide can be used by any clinician in the ED and sets a fairly low threshold for when to ask for a formal suicide risk assessment by a mental health professional. The American Psychiatric Association's "Practice Guideline for the Assessment and Treatment of Patients With Suicidal Behaviors" offers a broader scope of suicide assessment, although both resources provide useful information and guidance. For adolescents, there is a set of evidence-based management guidelines developed in the US. The Columbia-Suicide Severity Rating Scale is a useful screening tool in some settings and shows good predictive validity in adolescents.

Suicide assessment in emergency care settings most often focuses on static and dynamic epidemiologic suicide risk factors, elements particular to the patient's history, and an assessment of his or her mental state. For those tasked with suicide assessments, a working knowledge of suicide risk factors is important, including site-specific risk factors. For example, providers who work with Native American populations need to be attuned to the factors that increase or decrease risk.

Deciding to admit a patient to a psychiatric unit, with rare exceptions, can mitigate risk. But for the often larger percentage of patients not admitted, any sense of certainty needs to be tempered and planning for an appropriate level of support and follow-up is essential. It is worth noting that even with an exhaustive interview and gathering of data, there are limits on how much mental health providers can "know" about the inner workings of a suicidal patient's mind. For example, direct questions about suicidal ideation or intent were answered negatively at last check by 78% of completed inpatient suicides.

Documentation and the importance of formulation

Medical records are the primary means of capturing and communicating clinical reasoning. For suicide assessments, the risk assessment—as part of a more general formulation—should describe the clinician's thinking that led to the decision to discharge or admit. Documentation allows for communication of risk to the next care providers, including the need for heightened level of observation. This communication is critically important for receiving-inpatient teams and, for prolonged ED stays, the next shift of ED caregivers.

Suicide risk assessment can involve life-or-death decisions, often based on information that is likely to be incomplete.

In the psychiatric ED, the risk formulation can be one of the most important parts of the record. Ideally, the risk assessment is a formulation based on salient risk and protective factors. Safety contracts with suicidal patients offer little clinically and have no legal standing. Once a person has screened positive for elevated suicide risk, a more thorough assessment is needed to characterize risk and establish appropriate next steps. A thorough formulation can include elements of interest across the psychiatric spectrum, including psychiatric disease(s)/disorders, issues of temperament, substance use or other problematic behaviors, and any life-story issues that may be involved in (or even causing) the patient's presentation.

CASE VIGNETTE 2

A 35-year-old man is brought to the ED by 4 police officers just before midnight. While high on cocaine and synthetic marijuana, Mr. S drove his car into the side of an ambulance stopped at a red light. The ambulance was totaled, although it fortunately was not transporting a patient at the time and the EMS crew was not injured. Mr. S was unscathed and initially feigned cooperation with police officers on the scene, then ran from them and was caught. The officers are ambivalent about taking him into custody because of his disruptive, "crazy" behavior.

In the ED, he is profane, making a number of threatening statements about his own safety and that of others; he boasts about his sexual prowess as he is escorted to an open room. In addition to any charges he might face for this event, he has a court date in 2 days that may lead to prolonged incarceration on drug distribution charges. His psychiatric record reveals self-reported diagnoses of both bipolar disorder and schizophrenia that were thought dubious because 2 past admissions at this facility were for diagnoses of adjustment disorder, substance use disorder, and antisocial and borderline personality disorder traits.

His half-brother and an uncle died by suicide, and a paternal cousin was involved in the drug trade and died under suspicious circumstances. His other family history is notable for multiple family members with mood and substance use disorders. In between threats to kill himself and everyone else in the ED, he screams, "You have to admit me—I'm suicidal," and insists the crash was a suicide attempt.

The perils of an ED "siege mentality" culture

The ED can be a high-stress environment. The ED is at times the "tip of the spear" for psychiatric acuity; it is often where the greatest psychiatric symptomatology, behavioral issues, and medico-legal risk are concentrated. Suicide assessment in emergency care settings is one of the most challenging tasks for front-line clinicians. Working in a busy ED without the benefit of more extensive training, clinicians may reflexively categorize patients being assessed for suicide, using their own experience and hunches as guides. They may reduce patient presentations to several categories:

• Those who are malingering or “faking it”
• “Straightforward” patients, those who present with depression and suicidal thoughts who seek treatment voluntarily
• The “faking well,” those scariest of patients who minimize or deny symptoms, including intent to die by suicide, even when they have crafted a meticulous plan for their own demise.

The problem with this approach, of course, is that none of these groups can be defined with much reliability. The patient in the second vignette provoked a strong reaction in providers, who were subjected to his threats and taunts. Some resented that he had totaled an ambulance in a limited-resource community and believed that he was “putting on a show” as a way of escaping consequences. But even if this formulation is correct, the malingering sociopath with drug dependence still has a lifetime suicide rate far beyond the population rate and, if pushed, may do something impulsive out of spite to “prove” his or her suicidality or general instability. While resentful reactions to a patient who attempts to “con” us are understandable, it does not allow us to ignore the duty of thorough and rational assessment and planning.

Culture of safety

A number of new approaches offer promise in improving the quality and safety of care delivered in the emergency psychiatry setting. The Zero Suicide initiative begins with the premise that for those receiving care, suicide deaths are preventable. The initiative provides training programs and resources such as clinical and administrative tools and strategies as well as evidence-based guidelines for care. The approach is rooted in principles of patient safety and quality improvement and focuses on systems-level issues to solve problems in the health care setting.

The Science of Safety model helps achieve substantial improvement in quality and safety in health care. The basic principles that have helped reduce central line–associated bloodstream infections can be applied to the practice of emergency psychiatry.

The Comprehensive Unit-based Safety Program (CUSP) fosters a culture of safety and focuses on simple questions: How will the next patient be harmed? And how can it be prevented? As part of the CUSP process, an interdisciplinary group is assembled and includes a broad array of stakeholders: emergency medicine physicians and nurses, psychiatry providers, security officers, and a member of the legal office or clerical staff. The team is assigned a senior hospital executive. A culture assessment is completed and is reviewed with other unit-specific information that offers a snapshot of the unit. All aspects of patient care and the experiences of patients, staff, families, and others may be examined. The CUSP program focuses on creating and sustaining a culture of safety that relies on caregivers to identify areas of risk and work on solutions.
A CUSP team looking at defects related to suicide assessment might start by examining past events and “near-misses,” exploring the factors that may have been involved, such as the triage

process, communication among providers and other staff, handoffs, or even issues with the physical environment (eg, obvious safety risks in patient care areas).

The team's senior executive can be helpful in obtaining the resources needed to improve safety. When done well, CUSP can create a greater sense of teamwork and shared mission, building a culture that moves away from a reactive, "siege" mentality, where even patients and other providers are "part of the problem," to a more proactive stance, solving shared challenges.

Future directions

In addition to efforts in the patient safety and quality improvement realms, there is an array of ongoing research that examines the biological underpinnings of suicide. Suicide, at its core, is a behavior that is multiply determined and influenced, and research is being pursued from different directions.

Although only in its nascent stages, the prospect of a "third-generation" dynamic risk model for suicide has strong appeal. Unlike first-generation models based on elements such as expert opinion or second-generation models using static risk elements, a third-generation model would involve the fluid, responsive modeling of static and dynamic risk factors based on chronic and acute risk. The more mutable dynamic factors would be susceptible to intervention by psychiatrists. Being an older, white male, for example, is not changeable; exacerbation of a mood disorder or relapse of a substance use disorder, however, are examples of factors that with adequate warning might be attenuated by active intervention. These new models would ideally move beyond the checklist of static and dynamic factors and provide greater specificity and targeted interventions for patients at greatest risk.

Some researchers have found genetic and other biological correlates with suicide. Building on earlier studies that found low levels of 5-hydroxyindoleacetic acid in the cerebrospinal fluid of suicide completers and disruption of the hypothalamic-pituitary-adrenal axis (HPA), researchers have made a number of discoveries that may one day lead to biomarkers that can be used in the clinical setting as a suicide prevention tool. Many of the findings to date target the serotonergic and/or adrenergic systems and the HPA axis, as well as cytokines and chemokines (of inflammatory processes), all of which are tied to mood and stress and have been implicated in increased suicide risk. It has been suggested that these biomarkers may correlate more with impulsive traits or mood disorders than a "suicide gene."

There are intriguing findings that may someday offer the ability to measure a patient's suicide risk at baseline and at times when there are clinical indications of increased risk. These tests are not, however, ready for clinical use and any claims of their being able to "predict" suicide should be viewed skeptically.

A number of studies are examining various pharmacological agents for suicidality. A recent Cochrane review of 7 trials of antidepressants, fluphenazine, mood stabilizers, or natural products, and a small study of flupenthixol, did not find compelling evidence to support or refute their use as interventions for self-harm.

Despite the promise of future discoveries and new approaches to management of the suicidal patient, for now, the focus remains on fundamentals of assessment and basic safety. As our collective knowledge about the science of patient safety evolves, useful lessons from other health care settings may be applied to the psychiatric ED and to the care, assessment, and treatment of those referred for assessment for suicide risk. Further scientific advances in our understanding of the biological underpinnings of suicide, enhanced by broader principles of patient safety, offer the hope of better outcomes.

Additional Tools and Resources

In addition to the resources listed in the text and references, there are a number of other publications and organizations focused on suicide prevention in the ED setting. This list is not meant to be all-inclusive, but to represent a selection of related resources.

1. APA Practice Guideline for Assessment and Treatment of Patients With Suicidal Behaviors
2. Joint Commission Standards Booster Pak for Suicide Risk (N PSG.15.01.01)
3. Substance Abuse and Mental Health Services Administration (SAMHSA): After an Attempt: A Guide for Medical Providers in the Emergency Department Taking Care of Suicide Attempt Survivors
4. SAMHSA: After an Attempt: A Guide for Taking Care of Yourself After Your Treatment in the Emergency Department
5. Suicide Prevention Resource Center (SPRC) Caring for Adult Patients With Suicide Risk: A Consensus Guide for Emergency Departments
6. Suicide Prevention Resource Center (SPRC) Resources for Health Care Linkages for Suicide Prevention

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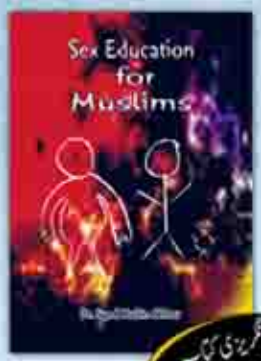

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Sex Education for Muslims

The Quran and Hadees provide guidance in all affairs of life. It isimperative for a Muslim to study the Quran and Hadees,understand them, and make these principles a part of daily life. The most important human relationship is that of marriage. It is through this institution that the procreation and training of the human race comes about. So its no wonder that the Quran and Hadees give us important guidance on this matter. But it is unfortunate that our authors,teachers and imams avoid this topic in their discourses due to a false sense of embarrassment. Moreover most of them are not well versed in the field of medicine and psychology. Therefore it's only people who have knowledge of both religion as well as medicine who should come forward to speak and write on the subject. We have included in this book all passages referring to sexual matters from the Quran, Hadees and Fiqa. These passages provide guidance to married as well as unmarried youngsters. If one reads this matter it would be ealser to maintain proper physical and sexual health, along with an enjoyable marital life. The reading of this matter as well as using it in one's life will be considered equal to.

The same book has been translated into urdu under the title of "نوجوانوں کے جنسی مسائل"

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Index of Topics
Bulletin January to September 2017

E

F

G

H

I