

ABSTRACTS

for the 35th IMANA Convention

Modanafil is Effective in Managing Endozepine Stupor

by Iftekhar Ahmad, MD

We describe a patient who presented with recurrent episodes of stupor and was found to have elevated levels of endozepine-4 in the serum during an attack. The vigilance-promoting drug modafinil appeared to be effective, safe, well tolerated and may be a better long-term treatment option than those previously tried in patients with endozepine stupor.

Islam and Illness

by Riyad A. Taha, MD, FACC, FACP

When illness occurs in a Mumin, Allah (SWT) is trying him or her. So he or she should seek treatment and be patient. Allah (SWT) will erase some of his or her sins according to the suffering that he or she endures.

Allah (SWT) also placed in very high esteem people who go and visit the sick. Allah (SWT) assigns 70,000 angels to pray for the person who has visited the sick.

Also, for the sick person, the Prophet (SAW) taught us that he or she should ask Allah (SWT) with a pure heart to heal him or her. The combined effect of prayer and medication is more effective than medication alone.

Incorporating Islam into Medical School Curriculum: Opportunities, Necessity and Benefits

by Salman Ali, Charles Bonfiglio, Rukhsana Iqbal, Fahd Khan

Objective: Discussion of implemented methods of raising the awareness of the religious and cultural needs of the Muslim community in a medical school curriculum.

Design and Methodology: Education and exposure starting at the student-physician level can promote a career-long sensitivity and appreciation of the needs of both Muslim patients and Muslim peers. The discussion deals with the efforts of Muslim medical students to incorporate Muslim cases, issues and beliefs into pre-existing courses' case presentations, problem-based learning and standardized patients. Formally improving the long-standing atmosphere, burdens and methods of reciprocal student physical examination in the laboratory setting was sought. Gathering and highlighting Islamic resources, topics and speakers was undertaken. Proactive community outreach and involvement from local Muslim physicians were also given priority.

Results: Overwhelmingly positive feedback came from faculty and students alike. Strong requests for continued involvement were noted.

Conclusion: The positive response from the student, school and clinical community were heartwarming. The pilot project and ideas can serve as a model for future inroads.

Assisted Reproductive Technologies: An Islamic Perspective

by Hossam E. Fadel, MD

The desire to have one's own offspring is a very strong human instinct. Allah ordained that some couples will be infertile. Infertility is a disease. Islam encourages us to find ways to cure diseases, including infertility, and encourage infertile couples to seek treatment. Assisted reproductive technologies offer infertile couples myriads of alternatives with reasonably good results.

Muslim jurists have studied many of these technologies in light of known Islamic principles using

"Ijtihad." The process of Ijtihad takes into consideration analogical reasoning, juristic preference, unrestricted public interest, customary practice among other principles of "Usul ul-Fiqh," as well as the aims of "Sharia," i.e. the importance of the preservation of lineage. In general, the jurists opined that ARTs are permissible provided the gametes used are those of a married couple within their life span, that extreme care is taken in the process that has to be carried out by competent physicians and provided that no harm is expected to the couple or the society at large. Based on the latter, human cloning has been considered unacceptable.

The "Fiqh" principles and rulings and the specific technologies, e.g. artificial insemination, in vitro fertilization with its various modifications, surrogacy and cloning, will be discussed in more detail.

Diabetes Management in Hospitalized Patients

by Shahid Athar, MD, FACP, FACE

Objective: To review the treatment modalities currently being used in the management of both Type I and Type II diabetes mellitus in hospitalized patients, while undergoing surgery, recovery from trauma, severe infection or parental nutrition.

Material and Method: Review of literature, author's own experience and discussion with other physicians, including house staff.

Conclusion: Based on the above review, some recommendations will be made to achieve optimum euglycemia in hospitalized patients to influence recovery and length of stay.

Do Prayers have a Place in the Healing Process?

by Shahid Athar, MD, FACP, FACE

Objective: To examine the healing effects and usefulness of prayer in both acute and chronic illness in inpatient and outpatient settings.

Material and Methods: Review of literature; review of Islamic scripture, Qur'an and the sayings of the Prophet Muhammad (SAW); personal interviews with patients, their friends, relatives and care providers including clergy; and effects/results of prayer in the healing process, including survival and decreased length of stay.

Conclusion: Based on review of literature and the above interviews and resultant effects on disease outcome, some conclusion will be drawn and recommendations made to Muslim patients and caregivers.

Ethical Controversies in Abortion: An Islamic Perspective

by Shahid Athar, MD, FACP, FACE

Objective: To examine current controversies in ethical aspects of abortion, to include definition of life, viability of fetus, concept of spirit (ruh), rights of mother, fetus and father, conception against will of mother (in case of rape, incest and war crime) and role of Muslim physicians.

Material and Methods: Qur'an (the Islamic scripture), the Sunnah (sayings of the Prophet Muhammad, SAW), opinions of Muslim Jurists of past and present and case studies

affecting Muslim families.

Conclusion: Based on the above discussion, some conclusions will be drawn and presented, hoping to develop an IMANA position in this difficult issue.

Lasers in Cardiac Surgery

by Husain F. Nagamia, MD

Lasers have been used in cardiac surgery for almost a couple of decades. Dr. Mir Husaini was the first to propose utilization of lasers to help "neo-vascularization" of myocardium that had been deprived of blood supply because of obstructed coronaries.

This paper examines the advent of lasers in cardiac surgery, their indication, usage and clinical results.

History of Surgery During the Islamic Period

by Husain F. Nagamia, MD

A number of books have been written and a lot of literature published regarding the medical advancements that Islamic physicians made during the epoch of Islamic civilization. However, little is known of the type of surgery that was practiced in the Islamic land during the same period. Although epochs of surgical practice during the Islamic period were epitomized by publications such as "Tasrif," authored by Al-Zahrawi, there were other notable surgeons during the Islamic period. A concise analysis of a practicing surgeon has not been published at the time. This paper will examine the practice of surgery during the Islamic period and detail out the standards of practice and care as to the practice of surgery during this period.

Combined Levothyroxine plus Liothyronine Compared to Levothyroxine Alone in the Treatment of Primary Hypothyroidism

by K.M. Shakir, MD, PW Clyde, AE Harari, EJ Getka, SA Smestad

Whether liothyronine (T3) supplementation, in addition to levothyroxine (T4), is beneficial in the treatment of hypothyroidism is unknown. In a double-blind study, we compared the effects of T4 alone with those of T4 plus T3 in 38 patients with 1 degree hypothyroidism for a four month period. The control group received their usual dose of T4. In the other group, 50 ug of T4 was replaced by 7.5 ug of T3 twice daily. Symptoms scores, biochemical measurements and psychological tests were performed at the start and the end of the treatment period. The serum TSH was similar in both groups before and after treatment. Patients developed lower serum free T4 and higher total T3 concentrations after Tx with T4 plus T3 than after T4 alone. Changes in symptoms of hypothyroidism (Table 1) and hyperthyroidism were similar in both groups. The blood pressure, heart rate, body weight, serum lipid and serum sex hormone-binding globulin conclusion, in patients with hypothyroidism, partial substitution of T3 for T4 demonstrated no improvement compared to replacement with T4 alone.

Table 1. Hypothyroid Symptom Score

	Baseline	End of Treatment	Change*	% Change
Control Group	74 +/- 25	52 +/- 19	-21 +/- 19	-25 +/- 23
T4 Plus T3	66 +/- 29	49 +/- 13	-16 +/- 27	-13 +/- 34
P Value	0.91	0.61	0.54	0.28

Higher scores suggest more symptoms. *Change was calculated from mean of individual changes in scores.

3-Hydroxy 3-Methylglutaryl Coenzyme A (HMG-CoA) Reductase Inhibitor Therapy Causes Myopathic Symptoms

by KM Shakir, V Mohan, FK Shakir, BS April, AJ Drake III

HMG-CoA reductase (statins) are the drugs of choice for treating patients with hypercholesterolemia. Although these drugs as a class have a relatively low incidence of side effects, myositis, rhabdomyolysis and renal failure and elevation of liver-associated enzymes (LAEs) may occur in a small percentage of patients. We recently observed muscle weakness, muscle cramps and myalgias occurring with normal serum creatinine kinase (CK) levels in patients receiving statin therapy. Five patients (ages 57-78) had hypercholesterolemia, meeting guidelines for drug treatment. They had normal baseline renal and liver functions and were not on any medications, which could potentially aggravate statin side effects. All five patients were treated with dietary counseling and simvastatin in a dose of 20 to 40 mg/day. After three to four months of weakness, PE confirmed grade IV/V weakness in four patients and grade III/V in one patient.

Lab: normal CBC, chemistry panel (including LAEs), thyroid hormones and CK. Serum CK levels, although within the normal ranged, showed a 40% increase above baseline (Table 2). Four weeks after statin discontinuation, there was complete resolution of symptoms, and CK levels reached pretreatment levels. One patient was challenged with a different statin (atorvastatin 20 mg qd) for one month and then increased to 40 mg qd. This patient's symptoms of myalgia, muscle cramps and minimal increase of CK (but WNL) recurred after three months of therapy. These features also improved after the discontinuation of the atorvastatin. None of these patients had any predisposing factors that might have resulted in rhabdomyolysis.

In conclusion, patients on statins may develop myopathic symptoms with normal serum CK levels, which may necessitate discontinuation of the drug.

Table 2. Serum CK Levels

	Baseline	Statin Therapy	Post Statin Discontinuation
Myalgias & Muscle Weakness	Absent	Present	Absent
Serum CK Levels	60.4 +/- 21.5	85.0 +/- 25.3	50.8 +/- 13.9
Values represent means +/- SD	Normal CK = 30-170 U/L		

Abnormalities of the Thyroid Gland in Patients with Moderately Low Serum TSH Levels

by R Ahmed, SK Shakir, AJ Drake III, KM Shakir

With the widespread use of thyroid function test (TFT) screening, a significant proportion of patients demonstrate moderately low serum TSH levels (>0.1 - <.45 mU/L). There are no clear-cut guidelines with regard to optimum management strategies for these patients. In order to study this further, we retrospectively analyzed 50 records of patients seen in our clinic.

Inclusion criteria: 1) TSH level on initial presentation of >0.1 - <0.45 mU/L, 2) Free T4 >0.71 ng/dl, 3) Not on thyroid hormones, 4) no history of Graves' disease and 5) no history of radiocontrast agent use for six months prior to obtaining TFTs. A total of 50 patients' charts were reviewed. The age range of 24-84 years (51.4 +/- 16.2, mean +/- SD) with 30 female and 20 male patients. None had eye symptoms to suggest ophthalmopathy. TFTs in 18 patients were performed because of the suspicion of a thyroid disorder, whereas the remaining 32 patients had these tests as part of health maintenance.

The levels of TSH and free T4 for the whole group were 0.29 +/- 0.09 mU/L, and 1.26 +/- 0.24 ng/dL respectively. Of the 50 patients, 34 (Group 1) had abnormalities of the thyroid gland (four patients with diffuse goiter, eight patients with a single nodule and 22 patients with a multinodular goiter). The TSH and free T4 for these 34 patients were 0.28 +/- 0.10 mU/L and 1.24 +/- 0.26 ng/dL, respectively. In Group 1 patients, 47% of TFTs were ordered following detection of thyroid gland abnormalities, whereas 53% of the gland abnormalities were defined after observing low serum TSH levels. Of patients in Group 1, ultrasound and/or thyroid scan was necessary to detect thyroid nodules in 38%, whereas in the remaining 62%, PE alone was sufficient to detect the abnormalities.

In Group 2 (n=16), thyroid exam was completely normal. In this group the TSH was 0.32 +/- 0.08 mU/L, and free T4 was 1.29 +/- 0.19 ng/dl. Although this is a selected population, patients with moderately low serum TSH levels often have nodular thyroid disease and thus may need close scrutiny.

Clinical Data

Table 3.

Patient Group	Age (years)	TSH (mU/L)	Free T4 (ng/dl)
Group 1	53 +/- 17	0.28 +/- 0.10	1.24 +/- 0.26
Group 2	48 +/- 15	0.32 +/- 0.08	1.29 +/- 0.19

n for Group 1 = 34; n for Group 2 = 16; TSH normal = 0.49 - 4.67; Free T4 normal = 0.71 - 1.85

High Fat, Carbohydrate-restricted Diet Improves Glycemic Control in Type 2 Diabetes Mellitus

by KM Shakir and JH Hays

Replacement of dietary carbohydrate (CHO) with the monounsaturated fat (MF) reduces blood glucose (BG) and triglyceride levels (TG) in type 2 diabetes mellitus (DM). Saturated fat (SF) is more acceptable than MF to patients accustomed to American diets. Patients with type 2 DM were initially placed on a standard calorie-restricted ADA diet for a year. Following this, patients (n=157, 84 males, 73 females), were advised to consume MF and SF in unlimited amounts while CHO was severely limited to fresh fruits and vegetables only. Diet logs indicated patients consumed up to 50% of total Kcals from MF and SF. Weight (WT) declined significantly, and 90% of patients reached ADA goals for HgAC, HDL, LDL and TG.

Despite a high-fat diet, caloric consumption decreased by 30%. Repeated measures ANOVA showed that the high-fat diet was correlated with reduction in BMI, possibly on the basis of early satiety. No deleterious effects by high-fat diet on serum lipids were observed. High-fat diet may be useful in selected patients with type 2 DM, although studies involving large number of patients are required.

Table 4. High-fat, Carbohydrate-Restricted Diet

	Control	3 months	6 months	12 months
BMI	33.4 +/- 0.53	32.3 +/- 0.55	32.2 +/- 0.54*	32.1 +/- 0.63*
Cholesterol (mg/dl)	231 +/- 10	202 +/- 4.4*	199 +/- 3.8*	190 +/- 4.9*
Triglycerides (md/dl)	229 +/- 15	178 +/- 11*	170 +/- 10*	182 +/- 17*
HDL (mg/dl)	44 +/- 1.4	44 +/- 1.2	45 +/- 1.3	47 +/- 1.5
LDL (mg/dl)	133 +/- 4.1	120 +/- 3.6*	117 +/- 3.5*	105 +/- 3.8*
HgAC Index	3.34 +/- 0.18	1.17 +/- 0.12*	0.94 +/- 0.11*	0.96 +/- 0.12*

*p<0.01 values represent mean +/- SEM. HgAC Index indicated values above the upper limit of normal (normal HgAC 4.2 - 5.9)

Multiple Attempts of CPR has Poor Outcome and is Not an Islamic Principle

by Sarfraz A. Choudary, MD, Neelofar M. Alam, MD, Imtiaz A. Choudary, MD, Sheikh N. Hassan, MD

Purpose: Though there are some studies on outcome of cardiopulmonary resuscitation (CPR), data is lacking on outcome after multiple attempts of CPR. We suspected the outcome is poor in these situations. Data is limited on outcome after even single CPR in minority patients. This study was undertaken to assess the different variables affecting outcome in a minority population and to review the Islamic perspective.

Method: This is a retrospective review of the University Hospital medical records of patients who had one or more attempts at CPR during one hospital admission between June 1999 to June 2001. Patients under the age of 18 years, missing records and patient's records with missing data were excluded from the study.

Sources: Medical records of all patients who had CPR in two years.

Results: Out of a total 321 records, 203 met the criteria for final review. Restoration of circulation were as follows: First CPR 127 out of 203; second CPR 35 out of 67; third CPR nine out of 25; fourth CPR two out of six; fifth one out of two. Twenty-two patients out of 203 survived for discharge from the hospital. Only one patient survived a second cardiac arrest, and this one occurred shortly after the first successful resuscitation. This patient had a drug overdose. No patients survived three or more attempts at CPR. A review of the Qur'an and hadith shows that Muslims must avoid wasteful spending.

Conclusions: Multiple CPR attempts are probably unwarranted in most instances. We waste a lot of resources on unwarranted codes, and such wasteful spending is against the teachings of Islam. Outcome in predominantly African-American population is comparable with previously published data in majority population.

Sleep Deprivation Impact on Resident Performance

by Hiruth Abebe, MD, Sheikh Hassan, MD

Objective: To examine whether current publications support the hypothesis that "Sleep deprivation impairs resident performance."

Methodology: Medline review of published literature in English language on sleep deprivation and resident performance.

Results: Using standardized testing, investigators have found that sleep-deprived residents have impaired language and numerical skills, retention of information, short-term memory and concentration. Additionally, tasks requiring vigilance and monitoring are the most negatively influenced by sleep deprivation. After night calls, arrhythmia recognition and mechanical skills were significantly decreased. In London, surgeons "on-call" and "up all night" made 20% more mistakes and took 14% longer

time to complete surgical tasks. In 1991, JAMA published that 41% of 145 residents surveyed cited fatigue as a major cause to their serious mistakes. However, other studies have failed to show an effect of sleep deprivation on cognitive performance of residents. Multiple studies have found that sleep deprivation has a clear negative effect on resident mood and attitude. One study cited "burnout" as a common complaint among residents and associated with self-reported suboptimal patient care. Literature reviews indicate that extended work hours result in less dedicated and focused learning. Opportunities for effective learning were also affected.

Conclusion: Literature demonstrates evidence of a negative impact of sleep deprivation on mood, performance and learning. Impact of sleep deprivation on cognitive function remains inconclusive and requires further investigation.

Homosexuality: Islamic Perspective and Role of Clinician

by M. Basheer Ahmed, MD

Homosexuality can be defined as a sexual orientation and a sense of personal and social identity with or without an alternative lifestyle. Homosexuality was regarded as an illness, but in 1973 it was removed from the Psychiatric diagnostic categories. The majority of psychiatrists believe that homosexuality is an alternative lifestyle rather than a mental disorder. It needs to be clarified that the expression of homosexuality is a matter of choice, which is under one's conflict.

Islam, as well as other major religions, clearly condemns homosexual behavior. The Quran (7:80-82) clearly prohibits and condemns any homosexual act. According to the Prophet, SAW's, saying: "The curse of Allah be upon he, who has a sexual activity with an animal and who imitates the people of Lut" (Ahmad and Tirmidhi).

Homosexuals are not emotionally disturbed or socially dysfunctional. If they are engaged in a homosexual act, they are committing a prohibited act, which is a major sin. They are committing an act that is similar to a heterosexual individual who indulges in a sexual relation without marriage. Islam condemns and prohibits a heterosexual act between unmarried couples. Islam teaches self-restraint.

As Muslims, we do not make religious laws, but we obey Allah's commands. We cannot impose our views on others, but we know the clear instructions from the Qur'an about homosexual behavior. We have a duty to teach the correct teachings of the Qur'an.

Muslim physicians and clinicians must have a non-judgmental attitude to help individuals who are suffering consequences of their behavior. A homosexual patient may be suffering from any illness, including AIDS. A sick homosexual patient is a sick person entitled to treatment with dignity and respect. When personal attitude interferes with our optimal doctor-patient relationship, the ethical course is to refer the patients to other colleagues.

Management of Acute Stroke: "One Stroke at a Time"

by Ashfaq Shuaib, MD, FRCPC, FAHA

After a significant decrease in its incidence in the 1950s and 1960s, stroke appears to be on the rise again in the new millennium. The increase is attributed to an overall graying of the population, and it is expected that by 2020, the number of new strokes per year would rise by 25%. Management of the problem requires a comprehensive and coordinated approach. The good news is that we are better able to prevent stroke in high-risk patients, and for the first time we can now offer treatment to selective patients who present to the hospital within the initial three hours after onset of symptoms.

Not too long ago, stroke prevention strategies revolved around the dose of aspirin. In the last decade, we have resolved the issue of dose and now have three other anti-platelet medications available for use. In addition, trials in the last two years would indicate that perhaps all patients with TIAs or acute stroke should also be taking an ACE inhibitor and a statin. Anti-platelets may reduce the risk of recurrence by 20%. The addition of an ACE inhibitor and a statin may produce a further 30% reduction in the risk of subsequent stroke.

Treatment of acute stroke has been an exercise in nihilism until the announcement in 1995 that thrombolysis with rt-PA can result in a significantly better outcome in patients where the medication is offered within the initial three hours from the onset of symptoms. The NINDS study revealed that for every 100 patients treated with rt-PA, an additional 11 patients would make a full recovery from the insult. Since the initial publication, several studies (including a 1250 patients study from our site) have clearly shown that the results of the initial report are reproducible. Management of acute stroke, however, is not limited to the use of rt-PA, which unfortunately can only be used in less than 5% of patients. Prevention of complications and admission to a designated "Stroke Unit" has been shown to significantly increase the number of patients who can be discharged from the hospital.

These are exciting times for the management of acute stroke. Newer 'neuroprotective drugs' are currently being tested, innovation in catheter design is allowing for direct infusion of thrombolysis in an occluded artery, and there are plans to introduce mild hypothermia as a potential treatment of acute stroke. In my presentation, I would review the most recent advances in the prevention and management of acute stroke and end by showing a glimpse of what to expect in the near future.

The Spiritual Dimensions of Trauma Healing

by Abdul Basit, PhD

Despite the amazing progress in the understanding and treatment of various mental disorders, psychiatry was severely constrained by two self-imposed limitations. It was, unfortunately, dominated by intellectuals who

considered religion as a vestige of a pre-scientific era. Consequently, the role of spirituality in the healing of pain and sorrow was neglected. Also, the split between mind and body, long taken for granted in Western philosophy and mind, prevented us from focusing on the mind's crucial role in pain, anxiety and depression. But now there is a growing body of evidence to suggest that grief, sorrow, tragedies and trauma cannot be explained by the science of scientific method; they actually belong to spiritual realms. During the past two decades, research studies have shown that, "... Faith quiets the mind like no other forms or belief . . ." (Benson, 1996). Traditional therapeutic approaches to trauma healing, therefore, must be reexamined in the light of modern research. This presentation will explain how faith, transcending experience and base reality, works like an anchor point that can help an individual overcome sorrow, pain and trauma and generate hope and expectancy.

Problems of Prematurity

by Samina Furhad

Objective: To educate the audience in the field of Neonatology. Defining premature newborn, various complications of premature infants and their outcomes.

Design: Pediatrix Medical Group did a study at different centers in the United States. This particular study was conducted at St. Joseph Hospital, Houston, Texas, over a period of a year.

Study: Premature newborns with different complications have been grouped together, and their outcome has been noted down in Graphic data.

Complications: Respiratory Distress Syndrome, Necrotizing Enterocolitis, Retinopathy of Prematurity, Intraventricular Bleed/Developmental Outcome

Conclusion: We have come a long way over the century and have had great success in saving these little ones.

Prevalence of High-Frequency MSI in Colorectal Cancers from African-Americans

by H Ashktorab, DT Smoot, M Rahmanian, R Kittles, M Doura, E Nidhiry, T Naab, B Momen, A Laiyema, O Ahmedfiqi, A Goel, JM Caruthers

Colorectal carcinoma (CRC) is the second most common cause of cancer deaths in the United States, and the rate of CRC is nearly 1.5 times higher in African-Americans than in Caucasians. Microsatellite instability (MSI) is observed in sporadic CRC reflecting promoter hypermethylation of the DNA mismatch repair gene hMHL1, and there is anecdotal evidence of an increased incidence of MSI among African-Americans.

Additionally, p16 can be inactivated by hypermethylation of its promoter region, which would abrogate its ability to regulate cell proliferation. This study was set up to determine if MSI is common in colorectal cancers from African-American patients and if MSI is associated simultaneously with p16 gene-silencing by methylation in the CRC from African-American patients.

Experiments were conducted on normal and colon

cancer tissue from the same subjects (N=22). Tissue was obtained retrospectively from archival specimens of colorectal cancer patients. Five microsatellite markers (Cancer Research 58: 5248-5257, 1998) were used to measure MSI in tumors with direct comparison to normal tissue from the same patient. P16 promoter methylation status was determined by DNA modification and methylation-specific PCR.

Ten cancers demonstrated MSI-H, one cancer demonstrated MSI-L and the remaining 11 tumors were micro-satellite stable. Most of the MSI-H tumors were proximal, well-differentiated and showed high levels of mucin production. Most patients in the MSI-H group were female (70%), while most of the MSS group (81%) was male. Five of the 22 tumors (22%) had methylation of the p16 promoter. Ten CRCs demonstrated MSI-H, three of which showed p16 promoter methylation (30%) Once cancer demonstrated MSI-L. The other eleven patient's tumors were MSS with two tumors demonstrating methylation of p16 (18%).

Thus, a higher proportion of tumors with MSI demonstrated methylation of p16 in this patient population. One hypothesis is that a common mechanism of methylation segregates with methylation of hMLH1 and p16, and possibly other genes, to contribute to the pathogenesis of CRC. The incidence of MSI-H lesions were 2- to 3-fold higher (48%) in our study group compared to the data reported for the general population. The difference might reflect dietary differences or genetic polymorphisms that may be common in the African-American population. Odds ratio analysis indicates that the chance of female patients having MSI-H was 11.7 times more than male patients ($P < 0.03$). The reason for this gender difference is unknown. Our findings need to be confirmed based on a larger patient population.

Advance Care Planning for Muslims

by Sheik N. Hassan, MD, FCCP, Maleeha N. Hashmi-Basha, MD

Definition: Advance care planning is a process that ensures the right of a competent Muslim to guide their medical care in accordance with Islamic principles through periods of decisional incapacity. This process, when accomplished, involves thinking through our values and preferences, talking with our family members, Imam and possibly an attorney, as well as documenting these decisions.

Advance directives are legal documents providing information about patients wishes and/or their designated spokesman. These documents include "living wills" and "medical powers of attorney." Living wills, also known as "health care declarations" provide specific information about one's health care or medical treatment at a time when one is unable to communicate those wishes. Medical power of attorney, also known as "appointment of a health care agent," allows an individual to appoint someone else to make decisions about their healthcare when they are unable to communicate.

Relevance: Advance care planning is important to Muslims, as it provides a necessary means for Muslims and their families to reduce the likelihood of conflict between family members and healthcare providers at the time of decisional incapacity. It also maximizes medical care goals of the Muslim patients, limiting suffering by providing awareness and respect for religious practices around illness and death. Also, it reduces the likelihood of over- and under-treatment. Advance care planning is different from, but just as important as, making plans for handling of our finances, property or will.

Background: There are an estimated seven million Muslims living in the United States. Regarding advance care planning, our understanding of addressing Muslim patients' needs has been very limited. Awareness and respect for common religious practice around death and dying are integral to compassionate care for ill patients. Helping a patient find spiritual resources and assistance is another way of providing care.

Methods: A detailed analysis of the Qur'an and Sunnah was conducted along with an electronic search of Medline using keywords: Muslim (or Islamic or Islam); Advance Care Planning (or Advance Directives). A manual review of JIMA from 1985 to 2002 performed.

Results: Relevant citations from Islamic sources, Medline and JIMA state that Allah has not created a disease for which there is no cure; (as) Allah cautions mankind against wasteful spending, ". . . Obey Allah, and obey the messenger, and those placed in authority amongst you, and if anyone saved a life, it would be as if he saved the life of the whole people;" and restraint should be exercised when making decisions to withhold or withdraw therapy.

Conclusions: Physicians can help their patients in a way that is fundamental to medicine by limiting suffering and not abandoning patients to the experience of illness. Palliative care is in conformity with Islamic teachings. With the complexity of our current situation, advance directives and advanced care planning should be specifically targeted to our growing population's need based on cost effectiveness and research. Muslim patients should become familiar with the concept and rationale for advance care planning. As health care providers, we should endeavor to engage our Muslim patients to better communicate with their family members in personalizing their advance care directives so that they are clear and contain pertinent information with clinical relevance. Muslim patients should be comfortable about discussing these matters with their Imam, if they are in disagreement with their physicians. Physicians should, in turn, be careful not to impose their personal prejudices on their Muslim patients.

End of Life Issues for Muslims in the United States

by Ayaz M. Samadani, MD

The end of life's journey and life here on earth is a fraction of the life hereafter. Muslims with their faith prepare themselves for the day of death and judgment. The Qur'an says "Inna Lillah-e wa Inna Allaihe Rajeeon, Kullo Nafsin Zaika Tul Mout."

Muslims are an integrated part of the United States society. The Muslim population is 9,992,860, which represents 3.75% of the total U.S. population, just a fraction more than Somalia's 9,639,151 total population. Religion distribution is 56% Protestants, 28% Roman Catholic, 2% Jews, 4% others and 10% none. In the United States, the death rate is 8.7 deaths per thousand population. Every year more than a million Americans die of a variety of causes. Some die easily and comfortably. Others die with a great deal of suffering and distress.

How Americans died in the past: In the early 1900s, average life expectancy was 50 years. Childhood mortality was high. Those who became adults could expect to live well into their 60s. However, only a few people lived to the ages that we regard as normal today. Historically, up until the development of antibiotics in the mid-20th century, people typically died quickly, often of infectious diseases or accidents. As only a few remedies were available to extend life, medicine focused on caring and comfort. While customs and traditions varied across cultures, most cared for their sick at home with support from a physician, if one was available.

Medicine's shift in focus: During the second half of the 20th century, the age of science, technology and communications shifted the values and focus of North American society on many levels. We have become a "death-denying" society. At the same time, new science and technology has offered the potential of medical therapies previously unknown. Where once physicians could only provide comfort in the face of serious illness, the modern health care system can now "fight aggressively" against illness and death. We frequently attempt to prolong life at all cost. Already the effect has been significant. Improved sanitation, concerted effort by health agencies and the development of a wide range of antibiotics and other medical interventions have increased life expectancy to an average of 78 years, and every year the statistics continue to improve.

Many physicians and healthcare workers have come to believe that they have failed if they do not save their patients from death.

End of life in America today: Death has not been conquered -- all of us will die. Qullo nafsin zaikatul mout. Recent advances in our healthcare system and biomedical science has prolonged the experience of living with chronic illness and the process of dying. Modern medicine combined with a strong faith makes a powerful prescription for reducing suffering and improving the quality of life

Just less than 10% of us will die suddenly of a myocardial infarction, an accident or another unexpected event. Most of us will experience a chronic life-threatening illness with variable course.

As we face death, uncertainty increases about the events that may occur. Patients and families worry that symptoms won't be managed, that they will lose function and control. They wonder who will provide care, how they will pay for it, what dying will be like and what comes afterward. In Islam there is clear information about affairs after death, and the Qur'an lays out guidelines that

Muslims must follow. Studies indicate that most patients and families who are living with a life-threatening illness can expect to experience multiple physical symptoms and psychological, social, spiritual and practical issues, many of which will be concurrent. Most of these problems add to a patient's and family's sense of suffering and reduce their quality of life.

In one study of patients with cancer, inpatients survived 13.5 symptoms while outpatients averaged 9.7 symptoms. While some of these symptoms are related to the primary illness, some are adverse effects of medications or therapy, and others result from intercurrent illness.

In all studies of symptom prevalence, pain, nausea/vomiting, constipation and breathlessness are very significant. As patients lose weight and become weak/fatigued, loss of function becomes increasingly present. For many people, the loss of their independence is devastating and a source of considerable suffering. In addition to physical symptoms, many patients and families also experience considerable psychological distress, including anxiety, depression, worry, fear, sadness, hopelessness, etc. In one study, 40% of patients with advanced illness where death was expected were afraid of being a burden to their families and friends.

Social isolation: Today, in contrast to our past, many Americans live alone or with only one other adult. Often both need to work, or, if they are older, at least one of them may be frail or ill. Other family members -- brothers, sisters, children and parents -- often live far away and have "lives of their own." Friends have their own obligations and priorities. There is considerable social isolation in this society that is built on independence and self-reliance. Today, when a patient needs assistance, the burden of caregiving frequently falls to a very small number of people, often women, mostly unskilled and without the resources they need to provide that care.

Financial pressures: In addition to the issue of who will provide care, financial issues associated with caregiving have a significant impact on the family. In one study, 20% of family members had to quit work or make another life change in order to provide care for a loved one. Even when they had medical insurance, a significant number of patients and families suffered financial devastation. One in three families lost most of their savings caring for their loved ones.

Place of death: In spite of the desire to die at home expressed by 90% of the respondents to a Gallup survey, death moved out of the home and into institutions. People die, shielded from the family's sight, usually behind hospital doors. In 1949, 50% of deaths in America occurred in institutions. As of 1958, this had increased to 61%. Since 1980 it has remained at around 74% (in 1992, 57% of Americans died in hospitals, 17% died in nursing homes and only 20% died in their own homes). Given the strongly expressed desire to die at home, the pattern of death in the United States is paradoxical. Although there is some regional variation, the majority of patients dying in hospitals and nursing homes are dying with illnesses where the expected outcome is death. They could be managed at home.

Role of hospice, palliative care: In order to help families care for patients with advanced life-threatening illness at home, hospice agencies started to appear across the United States during the late 1970s. In 1982 the government began reimbursing hospice care for Medicare beneficiaries with a prognosis of less than six months. Hospices care for only a minority of dying patients: 11% of all deaths in the United States in 1993 and 17% in 1995. Of those patients dying of cancer in the United States, only about 40% are ever referred to a hospice agency. There is significant regional variation, however. For example, 35% of all dying patients in Florida die with hospice care. The figure is 40% in Oregon.

Although the number of patients who die while being cared for by a hospice has been rising slowly, patients generally don't spend enough time in these programs to experience all of the potential benefits. In 1995, while the median length of stay was 36 days, nearly one-fifth of patients died within a week of admission. By 1998, the situation was worse. For a variety of reasons, the median length of stay had dropped to less than 20 days.

Life expectancy of less than six months is expected in hospice patients. Let patients know about the condition and make certain that the patient is competent. If patient is not competent, discussion should be held with the patient's agent who has health care power of attorney and legal guardianship.

Gaps: When the current status of care for the dying is summarized, the large gap between the way Americans currently live with life-threatening illness and die, and the way they would like to experience the end of their lives at home becomes apparent.

With the shift to fight death, "the enemy," at all cost, treatments have frequently become excessively aggressive, symptoms have not been controlled and patients have lost their independence. We should organize visitation services for the terminally ill and dying Muslims in the United States. We need to develop our own funeral homes with facility for bathing and prayers. We should have our own burial places. We need to work on establishing our own social services based on the guidelines provided in the Quran and Hadith.

Coping Strategies: We need to develop strategies for coping with illness, disability and loss of control.

Establish goals of care and explanation actions to achieve established goals at this point. Plan for any further tests and satisfying patient and relatives who have information in their hands from the Internet is necessary. Explain if treatment is curative or comforting and symptomatic in nature. We need to explain why to treat the symptoms of disease as best as we can with various

medicines but to no longer plan any curative treatment since there are no curative treatments.

The federal patient's self-determination act of 1990 required that any health agency receiving Medicare funding provide information on advanced directives to all patients on admission to a facility such as a hospital or nursing home. Advanced directives consist of durable power of attorney for health care and the living will. Power of attorney for health care designates a surrogate decision-maker if the patient is not competent or capable of making decisions for him or herself. Living will designates whether the patient desires IV dehydration or artificial feeding if in a vegetative or terminal state.

Recommendations of CPR: End of life care is guided by the values and wishes of patients. When a physician establishes that resuscitation would not be in the patient's best interest and the physician thinks that the patient is ready to hear this information, such information should be given. Ask patients for any questions regarding Do Not Resuscitate orders.

Qualified, competent, non-pregnant adults at least 18 may request and obtain a DNR bracelet from his/her physician. Physicians must write the orders in medical records for inpatients and outpatients.

We need to understand that prior to elective surgery, forms must be completed for advanced directives for health care decisions, there is time to accept with grace and compassion the dying and death of an individual, attending the dying is not parallel to treating a person with a specific medical or surgical condition and approach with care. Crisis accentuates the weak spots in the strongest families and relationships.

The lack of exposure to death: Physicians are hardly present at the bedside of a dying patient. We must understand their death by control of symptoms in particular, paying more attention to pain; develop skills in communicating with the patient's relatives; attending the wake; and attending funerals.

What to do: Familiarize yourself with the place of worship, now how to break bad news, the funeral home arrangements, cemetery allocation, prayers, family isolation and childcare.

Medical Education: Medical education and upgrading curriculum is necessary. In 1995 only 26% of residency programs offered end-of-life-care courses in their curricula and 57% of 50 best-selling medical textbooks excluded end-of-life-care information. Medical education culture is geared toward curing and cure disease but not the patients. We tend to look at tests, not at patients.

Professionalism

by Ayaz M. Samadani, MD

Professionalism is described in the dictionary as the conduct, aims and qualities that characterize a profession; following a line of conduct; moral code is the bases; extreme competence in an occupation; following of a profession; and social contract between a group and society that is based on trust.

We, professionals are morally responsible for high-quality service and majority of physicians keep high professional standards. Americans respect their current doctor despite distrust of the health care system. Our patients want the best medical service and are unable to understand the high cost of what they want. Patients need help for symptoms of disease, stress, grief, poverty, loneliness and inadequate coping skills.

Profession: A profession is a calling requiring specialized knowledge and often long and intensive preparation, including instruction in skills and methods, as well as in the scientific, historical or scholarly principles underlying such skills and methods, maintaining by force of organization or concerted opinion high standards of achievement and conduct and committing its members to continued study and to a kind of work that has for its prime purpose the rendering of a public service.

Faith and professionalism: Seek knowledge and practice with wisdom, learn even if one has to travel, learn the names as explained by Gabriel, dedication, ethics, wisdom and compassion.

Knowledge and Understanding: An understanding of the relevant behavioral sciences, including the interaction between individuals, their families, society and the environment in order to prevent illness and promote health.

Clinical skills:

- 1) The ability to take a relevant clinical history and perform an appropriate clinical examination accurately and sensitively.
- 2) The ability to form a reasonable hypothesis from the clinical findings and to take appropriate action to confirm or refute the diagnosis.
- 3) Familiarity with common conditions, and the ability to recognize conditions, which are less common and require referral to a specialist.
- 4) The ability to recognize when a patient need urgent management and, in particular, to recognize when it is necessary to call for help.
- 5) The ability to recognize psychological distress and to deal with it.
- 6) The ability to respond to the individual's problem and illness by formulating, with justification, a management plan for the common conditions within both hospital and community settings.

Intellectual skills:

- 1) A curiosity and desire to know more and the ability to find the information needed.
- 2) The ability to integrate knowledge and to manage its application to practice and its transfer from one field to another.
- 3) Well-developing skills in logical reasoning, critical appraisal and problem solving.

Communication skills:

- 1) Listening as well as talking skills.
- 2) Competence in written communication and the use of other media, including computers.
- 3) The ability to communicate with colleagues, including nurses and professionals allied to medicine, clearly, courteously and effectively.

4) The ability to communicate diagnosis and prognosis and explain treatment in terms which patients and relatives can understand. Included in this aim is the ability to convey bad news sympathetically and to handle the emotion that is generated.

Economic Influences: HMO, uninsured, the poor and self-monitored discipline.

Professional qualities:

1) The confidence to be self-critical and a willingness to evaluate personal performance and practice to a level adequate for the start of unsupervised professional practice.

2) The ability to work effectively as a member of multi-disciplinary health care teams.

3) An ethical "instinct," which reflects Professional Declarations of Standards and Behavior.

4) The ability to respond constructively to changes in professional practice and the demands of society.

5) Commitment to advancing the science and art of medical practice, both for personal development and on behalf of the profession.

Religion is the basis of setting up principles on how to conduct us in relationship with others: Tolerance, patient behavior, family, society and professional.

Free lunch: There is one sales representative with a budget of \$100,000 for each 11 physicians. Pharmaceutical representatives who influence prescribing habits use magnetic effect of food to attract doctors. Prescription expenses in 1990 were \$37.7 billion and in 1991 soared to \$121 billion.

Pharmaceutical companies invest 13 years with a cost of \$300 million. There is one in 10,000 tested drugs that exit pipeline as approved drug. Still Fortune 500 data shows that drug companies make 19% profit on revenue as compared to commercial banking, other industry and businesses.

Continuing medical education: The pharmaceutical industry is interested in selling prescription drugs, and CME relationship is inappropriate. CME goodwill is attached with strings -- providing teaching slides, free meals, compiled list of speakers and paying them. Education and communication companies now numbering over 100 commercial CME companies are paid by the drug industry.

ACCME approved these commercial CME companies and the national task force on CME provider/industry collaboration has nearly half members from the pharmaceutical industry. AMA master file of physician data has been for sale for the past 50 years accrued revenue of \$20 per year to AMA. The federal government sells a list of physicians DEA numbers and retail pharmacies provide drug industry of the individual physicians prescribing data for a free.

Ghost-writing journal articles earned \$20,000 for each of ten articles favorable to a drug company -- Redux. 96% of authors writing favorable reviews have financial ties with pharmaceutical companies. Expenditure in drug promotions is \$15 billion while medical education students for a \$5 billion and graduate medical education \$7 billion.

There are 83,000 drug detailers and less than 5% had any training in pharmacology. Drug companies spend \$8000 to \$13,000 per physician. Physicians have to stop nonrational prescribing that results from detailed parson

contact. Control receiving money from pharmaceutical companies to attend or speak at symposia. Guard physician requests for hospital formulary change due to misleading advertisement.

The drug industry gains favors by contribution to presidential campaigns of \$5 million. 90% of physicians rely on drug representative therapeutic information and 10 percent see them often. A very few patients know that doctors receive gifts from pharmaceutical companies. It amounts to 1500 free samples per physician with cost of these samples being \$7 billion.

Direct consumer advertisement and mass media ads costing \$3.5 billion with Vioxx at \$161 million, Prilosec at \$107 million, Claritin at \$100 million, Paxil at \$92 million, Zocor at \$91 million and Viagra at \$81 million.

What to do: We must work on changing physician behavior, limiting pharmaceutical influence on clinicians. Help legislatures to develop law on deductibility of advertisement expenses by pharmaceutical companies. Physicians have to revive altruism, the performance of cooperative non-selfish acts beneficial to others.

Altruistic behavior is to continue working or providing informal medical advice outside contracted hours, giving free treatment to poor patients in fee-for-service health care systems and willingness to go the extra mile in professional activities.

It is our duty to destroy the prevalence of mistrust between the medical profession, the public and the media by maintaining altruistic behavior.

Doctors working under difficult circumstances need direct or indirect courtesy extended and reciprocity support and assistance.

Our own behavior: Therapeutic impotence, pathetic gratitude, ineffective medical interventions, escalating demands and expectations, media hyperbole, enduring public appetite for miracles and clear dialogue between patients and doctors.

Management is cause for disenfranchisement and disengagement that are dimensions of demoralization and burnout, a constant threat to a physician's health. Improved working conditions, incentives and rewards for all health care workers.

A Model for Teaching "Islam and Medicine" in Medical Schools and Hospitals

by Malika Haque, MD, FAAP

In an effort to enhance cultural sensitivity and understanding of Muslim patients, to improve their management, both in ambulatory and hospitalized settings, and to alleviate misconceptions of Islam, a course entitled "Islam and Medicine" was introduced in the behavioral science program in the College of Medicine at Ohio State University in 1996.

Since inception, and now after six years, this module has been given a consistently high rating as compared to 30 other modules that are offered to first-year medical students, and as such is well accepted.

After Sep. 11, this module with expanded topics

took added significance and presentations were made to the Children's Hospital Staff, physicians, nurses, case managers, social workers and others in hospital settings. Again, it was very well received and highly rated.

An outline of this teaching module, ratings data and current relevance will be presented, particularly to encourage physicians and allied health professionals to set up such programs in their institutions.

Opportunities for Training for International Medical Graduates in U.S. Residency Programs

by SN Hassan, F Khan

International medical graduates (IMGs) constitute a significant proportion of physicians in residency programs in the United States. Many of these physicians remain in the United States in various positions and are very successful in their careers. In fact, more than 25% of physicians in the United States are IMGs ranging from academicians, trainees, specialists, sub-specialists and primary health care providers. IMGs are U.S.-born citizens, U.S. naturalized citizens, U.S. permanent residents and citizens of other countries on various types of visas in the United States. Physicians born in India constitute the largest numbers and percentage of the IMGs. In order to begin training in the United States, the IMG must first pass several examinations and be certified by the ECFMG. Passing the USMLE examinations, English test, Clinical Skills assessment and having ECFMG certificate are not enough. Research experience with publications, clinical activity since graduation from medical school and good communication skills are also important. Candidates who had multiple attempts before passing the examinations face a more challenging road for acceptance to residency training. This presentation will focus on the following: Strategies for maximizing the chances of acceptance into training programs, the role of IMGs in overcoming discrimination and stereotyping and how IMGs can make a difference in organized medicine.

The Miracle of Honey in Breast Cancer Cells

by Rasha E. El-Sadig

Breast cancer is the most common cancer in women worldwide. Although breast cancers are generally oestrogen receptor-positive initially, a substantial proportion become oestrogen receptor-negative.

Oestrogen receptor-positive breast cancers are associated with a better prognosis than oestrogen receptor-negative breast cancers as they are more responsive to hormonal therapy.

More than 1400 years ago, Allah and his messenger, SAW, told us that honey can heal a variety of medicinal problems. Allah says in the Qur'an: "And the lord inspired the bee, saying, 'Make hives in the mountains and in the trees and in what they build, Then eat of all the fruits and walk in the ways of your Lord submissively. There comes forth from within it a beverage of many colors, in which there is healing for men; most surely there is a sign in this

for a people who reflect" (Surat an-Nahl, verses 68-69).

Three different varieties of Sudanese honey collected from different parts of Sudan, in the south, west and east, were initially tested for their effects on the proliferation of MCF-7 and MDA-MD-231 breast cancer cells.

All three varieties of honey, when tested at a 20 times dilution in growth medium, produced 35% to 80% inhibition of growth of these cells. One particular variety west honey significantly inhibited the growth of MCF-7 cells and MDA-MB-231 by 80%+/-10 and 50%+/-5, respectively.

This honey was further characterized. Twenty times diluted honey was treated as follows:

- 1) Charcoal to absorb small molecular weight substances.
- 2) Ether extracted to remove ether-soluble substances.
- 3) One hour at 55 degrees Celsius to assess temperature-stability of the test substances.

The results of the effect of the above treatments were as follows:

% Growth Inhibition	MCF- 7	MDA-MB-231
Control	0%	0%
Untreated Honey	80%+/-5	50%+/-5
Charcoal stripped	85%+/-5	55%+/-5
Heated	77%+/-5	45%+/-5
Ether extract of Honey	15%+/-5	20%+/-10
Ether extracted retentare (aqueous soluble)	85%+/-5	60%+/-10
Ether blank	10%+/-2	20%+/-5
Ether extracted retentare (aqueous soluble)	15%+/-2	25%+/-8

In conclusion, a large molecular weight soluble component of honey was found to have significant growth inhibitory effects on MCF-7 and MDA-MB breast cancer lines. Further analysis is in progress to identify and characterize the substance. The identification of endogenous inhibitors of breast cancer cells is important. The substance present in honey may possibly have a role to play in the prevention of breast cancer development and progression.

The Effects of Sept. 11 on American-Muslim Physicians and Muslim Patients

by Shahid Athar, MD, FACP, FACE

Sept. 11 affected all American Muslims. American Muslim Physicians, 20,000 in number, rose to meet the challenge of removing misconceptions about their faith when many of them were called to make presentations to Church groups, interfaith organizations, civil associations or just one on one with their patients and colleagues.

In this paper, effects on American Muslim physicians and their patients is discussed. Most Muslim Physicians felt that they were treated with support from their colleagues, patients and co-workers.

They acknowledged receiving no backlash or discrimination.