Aging Research Institute Newsletter

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Dean of Faculty of Medicine's Message

The global population is going toward aging and every country all over the world is experiencing growth in number and proporton of elderly people in its population. This fundamental evolution has affected all sectors of a society and will change the economic outlook of employments and services. This evolution brings new challenges and commitments that they may have not previously been in consideration. Thus, all innovations, services, products and marketings should accept the elderly as a very large and important target group. The prevailing psychological ambience of political thoughts and views should actively welcome the presence of the elderly. Comprehensive systems should be built for the well-being and respect for this age group. The focus of scientific and research societies on the above-mentioned demographic changes and population aging in order to formulate effective policies at various levels to promote the welfare of the elderly, is necessary and undeniable. I hope this newsletter would help to improve health outcomes and age care practices and to bring policies to manage problems and needs of growing elderly population. We, as the academic members of the university, hope to have a world where older people would be respected and healthy.

Hojjat Pourfathi Nematabad

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Benefits of Manual Workouts for the Elderly

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Aging is one of the phenomena that have attracted the attention of researchers and health policymakers due to the global increase of the elderly population. Health Maintenance and improving it by preventing chronic diseases increases the quality of elderly life. In Persian texts and books, special recommendations have been made for these ages in order to observe nutritional measures, sleep, exercise, movement, and etc. Herein, there are some tips for doing manual workouts like massage and cupping. These recommendations are to maintain health before the onset of the disease or to reduce symptoms in disease with the aim of treatment and improving quality of life. Today, usages of these cases have been demonstrated in clinical trials and in practice. There are serious considerations and restrictions for performing some types of manual therapies such as wet cupping and venesection in old age. In this article, we will discuss some common problems in old age and the effects of massage and cupping on them.

Massage involves manipulating the superficial and deep layers of muscle and connective tissue using a variety of techniques. It is defined as a systematic form of touching soft tissues with the hands for therapeutic purposes such as relieving pain and increasing patient comfort(1). Cupping is a very old method of treatment that involves the use of vacuum suction(2). Cupping can be used in both hot and cold forms and can be moving or fixed.

One of the most common gastrointestinal complaints in the elderly is constipation, which is prevalent in 50% of the elderly. This percentage may reach up to 74% in nursing home residents and is two to three times higher in women than in men(3). Constipation causes other problems for the elderly and reduces the quality of life, so it needs treatment. However, there are various pharmacological and non-pharmacological methods (such as exercise, dietary changes and enema) to control constipation, and due to the possibility of using various drugs in the elderly, it is necessary to use uncomplicated methods in the long period. Abdominal massage is an effective method that is easy to use and if it is done correctly, it is without complications(4).

Musculoskeletal disorders are one of the major public health problems that cause more functional limitations in the middle-aged and elderly population than in any other group. These disorders are a major cause of disability in later life(5). Osteoarthritis in the joints of the body, back pain and chronic pain are among the musculoskeletal problems. There are several studies on the effectiveness and efficiency of using different types of massage in reducing pain. Reduction of symptoms of osteoarthritis of the knee(6, 7), improvement of chronic low back pain(8-10), neck pain(11) and pelvic pain(12) are among the cases in which massage has been effective.

Sleep disorders in old age are seen in various forms such as difficulty in starting sleep, sleep interruption, lack of deep sleep, insomnia and etc. Up to 50% of older

people suffer from insomnia(13). Insomnia often coexists with depression and anxiety and can lead to poor quality of life. Massage can improve sleep disorders. In a study of older women with sleep disorders, hand massage combined with placing their hands in warm water in the evening improved sleep quality and delayed sleep (14).

As mentioned before, in addition to massage, cupping is also known as a form of manual workout. One of the advantages of these two treatments is that they effect quickly. In a study that examined the effects of cupping on neck pain, it was found that one session of cupping therapy had beneficial effects on reducing neck pain and also increased the amount of oxygenated hemoglobin in patients' blood(15). In a systematic review and meta-analysis conducted in 2018, it was concluded that cupping therapy has proven effects on chronic low back pain and significantly reduces back pain(16). Another study has shown that the use of heated cups can improve the severity of dryness, pain and disability in patients with osteoarthritis of the knee(17).

Shoulder pain, which is more prevalent in middle-aged and older people(18), is another common complaint. The effect of cupping on relieving chronic shoulder and neck pain compared to the group that did not receive the intervention was also evaluated in a clinical trial. The rate of improvement in pain intensity using different criteria was significantly higher in the group who received cupping therapy(19).

According to Persian medicine, exercise is suitable for the elderly with consideration of the physical condition of each elderly person (including aerobic exercise such as walking). Massage and application of suitable oils to the body are some beneficial tips for the elderly, too. Proper massage can play an important role in maintaining health of the elderly. Cupping therapy is another useful treatment method for the elderly, which is useful for some problems of this age group under the supervision of an experienced and skillful doctor.

Keywords: Aging; Medical Research; health policymakers.
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References

1. Sedergreen C. Massage therapy-a review. BRITISH COLUMBIA MEDICAL JOURNAL. 2000;42(7):342-4.
2. World Health Organization, WHO International Standard Terminologies on Traditional Medicine in the Western Pacific Region, Aupuncture and Moxibustion: Cupping, WHO Library Cataloguing in Publication Data, Geneva, Switzerland, 2007.
3. Tamura A, Tomita T, Oshima T, Toyoshima F, Yamasaki T, Okugawa T, et al. Prevalence and self-recognition of chronic constipation: results of an internet survey. Journal of neurogastroenterology and motility. 2016;22(4):677.
4. Okuyan CB, Bilgili N. Effect of abdominal massage on constipation and quality of life in older adults: A randomized controlled trial. Complementary therapies in medicine. 2019;47:102219.
5. el-Fetoh NMA, Alanazi AM, Alotaibi HK, Alanazi KA, Ali AMB. MUSCULOSKELETAL DISEASES IN ELDERLY POPULATION OF ARAR CITY, KINGDOM OF SAUDI ARABIA: A CROSS-SECTIONAL STUDY. European Journal of Research in Medical Sciences Vol. 2017;5(1).
6. Perlman A, Fogerite SG, Glass O, Bechard E, Ali A, Njike VY, et al. Efficacy and safety of massage for osteoarthritis of the knee: a randomized clinical trial. Journal of general internal medicine. 2019;34(3):379-86.
7. Perlman AI, Ali A, Njike VY, Hom D, Davidi A, Gould-Fogerite S, et al. Massage therapy for osteoarthritis of the knee: a randomized dose-finding trial. PLoS One. 2012;7(2):e30248.
8. Furlan AD, Yazdi F, Tsertsvadze A, Gross A, Van Tulder M, Santaguida L, et al. Complementary and alternative therapies for back pain II. Evidence report/technology assessment. 2010(194):1.
9. Nazzal ME, Saadah MA, Saadah LM, Al-Omari MA, Al-Oudat ZA, Nazzal MS, et al. Management options of chronic low back pain. A randomized blinded clinical trial Neurosciences (Riyadh). 2013;18(2):152-9.
10. Furlan AD, Giraldo M, Baskwill A, Irvin E, Imamura M. Massage for low-back pain. Cochrane database of systematic reviews. 2015(9).
11. Field T, Diego M, Gonzalez G, Funk CG. Neck arthritis pain is reduced and range of motion is increased by massage therapy. Complement Ther Clin Pract. 2014;20(4):219-23.
12. Field T, Sauvageau N, Gonzalez G, Diego M. hip pain is reduced following moderate pressure massage therapy. Chronic Pain & Management. 2019.
13. Trawka P, Bednarek H, Karło A, Hejnosz P, Walczak M, Graczykowska K, et al. Insomnia in elderly patients–various ways to manage. Journal of Education, Health and Sport. 2019;9(8):763-72.
14. Kudo Y, Sasaki M. Effect of a hand massage with a warm hand bath on sleep and relaxation in elderly women with disturbance of sleep: A crossover trial. Japan Journal of Nursing Science. 2020:e12327.
15. Stephens SL. The Immediate Effects of Dry Cupping Therapy on Subcutaneous Hemodynamics and Pain Associated With Nonspecific Neck Pain: Illinois State University; 2019.
16. Moura CdC, Chaves ÉdCL, Cardoso ACLR, Nogueira DA, Corrêa HP, Chianca TCM. Ventosaterapia y dolor crónico en la espalda: revisión sistemática y metanálisis. Revista Latino-Americana de Enfermagem. 2018;26.
17. Poorgheysar A, Sajjadi M, Shareinia H, Mohammdzadeh MH, Nouroozi A. The effect of hot intermittent cupping on pain, stiffness and disability of patients with knee osteoarthritis. Traditional Medicine Research. 2019;4(1):25-32.
18. Worland RL, Lee D, Orozco CG, SozaRex F, Keenan J. Correlation of age, acromial morphology, and rotator cuff tear pathology diagnosed by ultrasound in asymptomatic patients. J South Orthop Assoc. 2003;12(1):23-6.
19. Chi L-M, Lin L-M, Chen C-L, Wang S-F, Lai H-L, Peng T-C. The effectiveness of cupping therapy on relieving chronic neck and shoulder pain: a randomized controlled trial. Evidence-Based Complementary and Alternative Medicine. 2016;2016.

Editorial

The Coronavirus and the Spanish Influenza Pandemic: Lessons from Prior Pandemic to Learn for Future Threats

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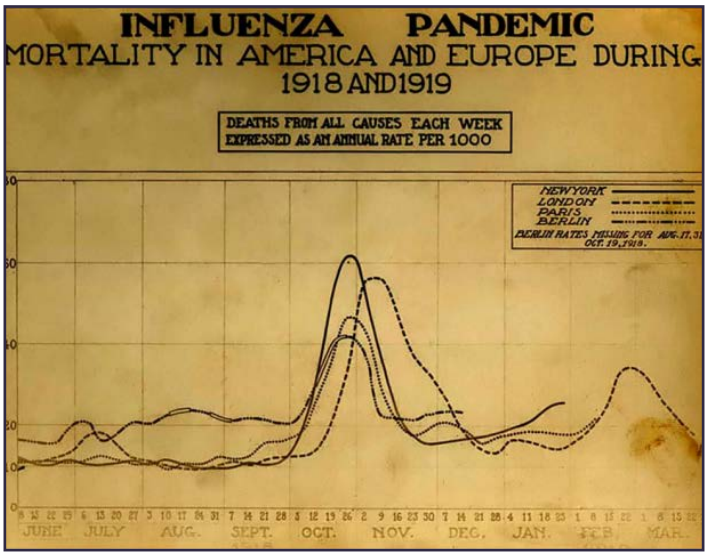
Since Dec 8, 2019, multiple human cases of novel coronavirus infection were reported in relation to the Huanan Seafood Wholesale Market in Wuhan, China. On 7th January 2020, scientists promptly isolated a novel coronavirus which originally abbreviated as 2019-nCoV by World Health Organization (WHO), from confirmed infected pneumonia patients that had >95% homology with the bat coronavirus(1, 2). Coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is a current worldwide health emergency. On March 11, the WHO has declared coronavirus disease 2019 a pandemic, and as of July, 2020, more than 13,500,000 confirmed cases and more than 570,000 deaths have been reported around the world. Coronavirus disease 2019 has become the fifth documented pandemic since the 1918 flu pandemic(3). In 2002, SARS-CoV arised, which apparently infected 8422 people and caused 916 deaths worldwide during the epidemic. Middle East respiratory syndrome coronavirus (MERS-CoV) was first recognized in 2012, triggering a total of 1401 MERS-CoV infections, 543 of which died(4). The world's experience with the Great Influenza Epidemic (Spanish Flu1), which initiated and peaked in 1918 and continued through 1920, is a sensible upper bound for the coronavirus's mortality and economic effects(5). The Spanish flu did not start in Spain but was called that because Spanish



newspapers were the first to report about it. From its recognized origins in a World War I military Camp Funston in Kansas, United States, it quickly spread over the world in three consecutive waves. The first in the spring of 1918, was followed by a second, most lethal outbreak, responsible for 90% of deaths – in the autumn of 1918 (between September and December), and a final upsurge from the winter of 1918 to the spring of 1919(6). Based on data,

this pandemic killed around 50 million people worldwide, corresponding to 2.0 percent of the world's population at the time. History displays the flu pandemic ebbed after a third wave in spring 1919 without the advantage of an influenza vaccine, or efficient antiviral therapy, or a molecular or serologic test, or the support of mechanical ventilation(6). Useful public health interventions to reduce the peak of new cases and control the spread of the disease back in 1918 just as in 2020 include better personal hygiene, quarantine, social distancing and reducing person to person contact and end much of public life. The consequences of findings from the Spanish Flu1for the ongoing coronavirus epidemic are worrying. The results suggest that, the possibility exists for extraordinary numbers of deaths and also the depressed economic activity(5). Other pandemics will happen. At this time, the risk of emergence is commonly coming from coronaviruses, arboviruses, and influenza viruses. The threat should be managed before it is known as a disease and it is essential for governments to make the subsequent emerging pandemic stop at the origin before triggering long-lasting destruction to society and economy(7). Anecdotal evidence from the 1918 influenza pandemic in the US cities displays the significance of prompt action in postponing outbreaks. Slowing the spread to controllable levels will assist the medical staff to make available and suitable care to patients and keep up social order(8). As I write these words, the future of the pandemic is unclear. We don't know whether the virus will mutate, how many people will die, and what will happen in economy after the pandemic is gone. In general, appropriate action in individual communities could advantage the entire world.

Keywords: Coronavirus; COVID-19; Spain Influenza; Pandemic.
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References

1. Jiang, F., et al., Review of the clinical characteristics of coronavirus disease 2019 (COVID-19). Journal of General Internal Medicine, 2020: p. 1-5.
2. Wu, P., et al., Real-time tentative assessment of the epidemiological characteristics of novel coronavirus infections in Wuhan, China, as at 22 January 2020. Eurosurveillance, 2020. 25(3): p. 2000044.
3. Liu, Y.-C., R.-L. Kuo, and S.-R. Shih, COVID-19: The first documented coronavirus pandemic in history. Biomedical journal, 2020.
4. Organization, W.H., WHO MERS global summary and assessment of risk, July 2019. 2019, World Health Organization.
5. Barro, R.J., J.F. Ursúa, and J. Weng, The coronavirus and the great influenza pandemic: Lessons from the "spanish flu" for the coronavirus's potential effects on mortality and economic activity. 2020, National Bureau of Economic Research.
6. Spinney, L., Pale rider: The Spanish flu of 1918 and how it changed the world. 2017: PublicAffairs.
7. Frutos, R., et al., COVID-19: The Conjunction of Events Leading to the Coronavirus Pandemic and Lessons to Learn for Future Threats. Frontiers in Medicine, 2020. 7: p. 223.
8. Ebrahim, S.H., et al., Covid-19 and community mitigation strategies in a pandemic. 2020, British Medical Journal Publishing Group.

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History of Medicine: Management of Elderly Health in Persian Medicine

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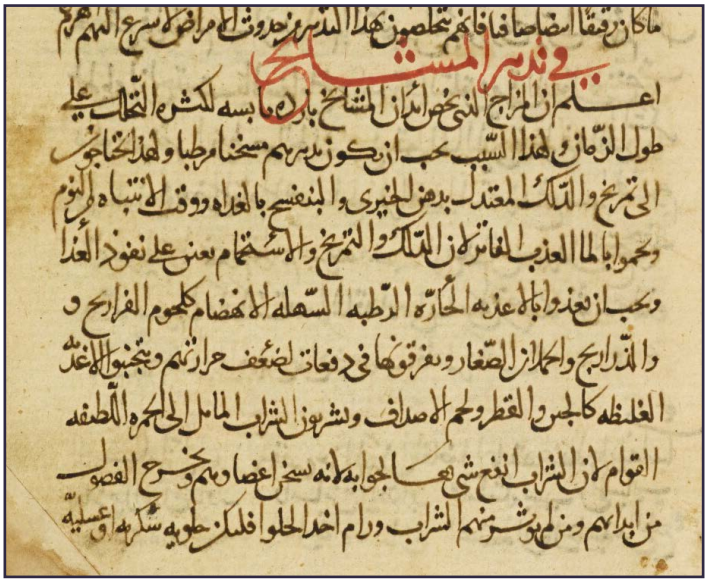
Health care, hygiene and treatment of diseases of the elderly is one of the most important issues in the history of medicine. Among the remnants of the ancient civilizations of Iran, Egypt, and Mesopotamia, interesting recommendations can be found for the treatment of the elderly, such as many herbal remedies for the treatment of dementia in the elderly(1). Three thousand years ago, the ancient Iranians cared so much about the elderly that they set a specific day of the year to pay their respects, honor, and give their thanks. After the extinction of the Sassanid Empire and the advent of Islam thanksgiving of the elderly was dedicated to Nowruz, because it was customary in the days of Nowruz to go to the elders for celebration(2, 3).

In the Middle Ages, especially in the ninth and tenth centuries AD, following the extensive translation of Greek, Pahlavi and Hindi scientific works into Arabic, a new era of medicine began in the Islamic lands, which was mostly a combination of the three medical schools of Iran, Greece and India. Special attention was paid to the elderly, their health and geriatric medicine in the Islamic era in such a way that in most of the books of physicians of that time, a separate chapter entitled "Plans for the Elderly" is dedicated to the issues of elderly(4).

In the history of Islamic medicine of the Middle Ages, different stages of human life were classified into four categories: from birth to thirty years of age; youth including thirty to forty years; the age of decline of power, which is up to age of sixty years; and the age of degeneration,



which is associated with the occurrence of weakness in old ages beginning at the age of sixty and lasts until the end of life(5).

In Firdous al-Hikmah (Paradise of Wisdom), which is the first comprehensive medical book of the Islamic period, Ali ibn Rabban al-Tabari lists the diseases of old age separately and has interesting recommendations for the elderly. Tabari lists the diseases of the elderly as paralysis, insomnia, cough, weak eyesight, and kidney pain. He has also mentioned health recommendations for the elderly

according to the temperature of four seasons(6).

Muhammad Ibn Zakaria al-Razi, a famous Iranian physician, has specifically addressed the issue of maintaining the health of the elderly and treating their diseases. Razi considers stomach disturbances and indigestion to be important in the elderly, which can lead to death if not taken into consideration properly. Hence, he recommends adequate and proper nutrition and treatments to improve the health condition of the elderly(7).

Ibn Sina, the most famous Iranian physician and philosopher, whose books have been translated into several European languages several times since the twelfth century, mentions the importance of old age in a separate chapter and offers advices for maintaining the health of elderly, some of the most important of which are: enough sleep, need for healthy and tonic food, more bathing compared to young people, caring for the gastrointestinal tract, massaging the limbs of the elderly, aromatherapy and the use of perfume, and finally a strong recommendation for walking and physical activity(5).

Keywords: History; Persian Medicine; Elderly Health.
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References

1. Park K, Daston L, Lindberg DC and Numbers RL. The Cambridge history of science. Cambridge University Press Cambridge, 2006.
2. Ghirshman R and Munn-Rankin M. Iran: from the earliest times to the Islamic conquest. Penguin Books Harmondsworth, Eng., 1954.
3. Dandamaev MA and Lukonin VG. The culture and social institutions of ancient Iran. Cambridge University Press, 2004.
4. Gutas D. Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early ‘Abbasid Society (2""-4" 1/8" 1-10”'centuries). London—New York. 1998.
5. Avicenna H. The canon of medicine (Al-Qanon fi al-Tibb). Beirut, Lebanon: Dar Ihyaa al-Turaath al-Arabi. 2005.
6. al-Ṭabarī R. Firdaws al-ḥikma fī al-ṭibb. sn Beirut, 1970.
7. Razi A. Al Hawi fit Tib. Dairatul Maarif Osmania Oriental Publications Bureau Osmania University Hyderabad. 1967; 20: 569-73.

→ The photo in the first-page of the newsletter is related to the first winner of the photography section in "COVID-19 Global Challenge and Its Consequences" competition from Ms. Nasrin Someh, Master student of Biostatistics in Tabriz University of Medical Sciences. This competition was held with the aims of attracting students and researcher’s participation and using the capacities of science and art in promoting the culture of coping with the coronavirus in the fields of scientific articles, graphic designs, photos, films, paintings and social participation. It was held by the Student Research Committee in collaboration with the Research Vice Chancellor of Tabriz University of Medical Sciences. The reason for choosing this photo in this issue of newsletter is showing the proper culture to deal with coronavirus and reducing its adverse consequences in the elderly.

Research Project

The effect of nutrition education by peers and health care workers on the knowledge of the elderly about healthy nutrition in Tabriz

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Background: The traditional education methods such as teacher-based classes for training numerous older people are time-consuming, expensive, and difficult. Nutritional problems in the elderly are one of the most common factors affecting their body and mind. Due to the increasing number of the elderly population in Iran and the lack of adequate health staff, the maintenance of traditional approach to nutrition education has its own time and financial challenges. Therefore, this study was carried out to compare the education effect by peers and health care workers on the knowledge of the elderly and to choose the reasonable method according to the prevailing conditions of the society.

Methods and materials: In this applied research, 246 elderly in Shadpur health center of Tabriz were randomly divided into two equal groups of education by peers or by health care workers and were trained about the nutrition in elderly. The knowledge score of both groups was determined based on a standard questionnaire in the three stages: before, immediately, and two months after the training course. Data analysis was carried out by SPSS version 16. The repeated measures ANCOVA was used to examine the trend of quantitative data with a normal distribution during the intervention.

Results: The mean age in the training group by peers was 65.5 and in the training group by health care workers was 64.6. Before the training, the knowledge score in the health care workers and peer groups was 22.8 ± 5.0 and 23.5 ± 4.7, respectively. Immediately after training, the knowledge score in the peer group and in the health care workers group was changed to 28.9 ± 2.0 and 27.3 ± 3.0, respectively. The average score of knowledge imme-

diately after training in the peer training group was higher than the care workers training group. Two months after training, the average knowledge score in the health care workers group was higher than the peer group.

Conclusion: At the first stage, the high knowledge in the peer group shows the high impact of peer education in the elderly. If this teaching method is used, it can encourage learning in the elderly, and this method can be used alongside the care workers training method.

Keywords: nutrition education, peers, awareness.
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Top Article

Congratulations to Dr. Ali Ahmadalipour, Assistant Professor of Physiology, TUOMS, on having his article entitled: "The first evidence of an association between a polymorphism in the endocannabinoid-degrading enzyme FAAH (FAAH rs2295633) with attention deficit hyperactivity disorder", published in Genomics journal (IF=6.205), which has been selected as the top article of this issue. Aging Research Institute expresses the warmest greeting to him.

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journal homepage: www.elsevier.com/locate/ygeno

Original Article

The first evidence of an association between a polymorphism in the endocannabinoid-degrading enzyme FAAH (FAAH rs2295633) with attention deficit hyperactivity disorder

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Genetic association

ABSTRACT

Several single nucleotide polymorphisms (SNPs) of the fatty acid amide hydrolase (FAAH), the degrading enzyme of the endocannabinoids, have been shown to be associated with many neuropsychiatric disorders. Here, *FAAH* rs2295633 was studied in ADHD and case-control healthy children. There was a significant difference in the allele frequency ($P = .04$) and genotype distribution ($P = .04$) of the *FAAH* rs2295633 between ADHD cases and controls. The ADHD children appeared to have less of TT genotype (OR 0.596, 95% CI 0.178–0.884, $p = .024$) and T allele (OR 0.658, 95% CI 0.440–0.982, $p = .04$). To our best knowledge, this is the first statistical significant association between *FAAH* rs2295633 genotype and ADHD disorder. Larger sample sizes and functional studies are warranted to explore the clinical utility of *FAAH* genotyping as a possible marker for increased ADHD risk in children.

1. Introduction

Attention deficit hyperactivity disorder (ADHD) is a common neuropsychiatric disorder affecting some 5–12% children and adolescents and is characterized by behavioral symptoms of inattention and/or hyperactivity or impulsivity. ADHD is associated with poorer academic performance and fewer friends during schooling years [1]. ADHD continues through adulthood in 60–70% of cases (4–5% of adults) [2,3], and causes significant functional disabilities including antisocial behavior [4], high rates of criminality [5], low job performance [6] and substance abuse [7].

Genetic and neurobiological studies have shown that multiple risk genes are responsible for the underlying liability to ADHD, with estimates of heritability at 76% [8]. In addition to strong neurobiological and genetic underpinnings, environmental elements are also shown in both the etiology of ADHD [9] and its related impairment [10].

Several studies of adult ADHD include participants who report significant substance use, and many studies of substance-using populations report significant comorbidity for ADHD [5,11,12]. Consistent with population-wide trends, adults with ADHD describe self-medicating mostly with cannabis, with some reporting a preference for cannabis over ADHD medications [13].

Beginning in the 1960s and continuing until now, treatment with stimulant drugs has been popular. Some evidence suggests that responses to psychostimulants such as amphetamine are partly influenced by the endocannabinoid system [14,15]. The endocannabinoid system, consisting of two lipid mediators derived from membrane phospholipids or triglycerides including anandamide (*N*- arachidonoylethanolamide, AEA) and 2-arachidonoylglycerol (2-AG), the cannabinoid G-protein coupled receptors (CB_1 and CB_2), and the endocannabinoid degrading enzymes monoacylglycerol lipase (MAGL) and fatty acid amide hydrolase (FAAH). Endocannabinoid system is involved in

Abbreviations: ADHD, Attention deficit hyperactivity disorder; AEA, arachidonoylethanolamide; 2-AG, 2-arachidonoylglycerol; FAAH, fatty acid amide hydrolase; SNP, single nucleotide polymorphism; CB_1, cannabinoid receptor 1; CB_2, cannabinoid receptor 2

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Student Letter

Depression in Elderly

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In older people, depression is a main public health concern that is associated with cognitive impairment, diabetes, Alzheimer disease, Parkinson disease, arthritis, increased disability and mortality(1,2). Increased mortality due to suicide and medical disease has significant relationship with depressive disorders in later life(1).

Although some improvements have been made in characterizing the presentation of late-life depression and its treatment, this disorder continues to have detrimental consequences(3,5). However, it seems that the prevalence of major depression among those 65 years or older is approximately 1% to 4%, which is similar to (or perhaps even lower than) other groups(4).

Some aging-related and disease-related processes, including arteriosclerosis, inflammation in endocrine system, the amygdala and the hippocampus can result in increasing vulnerability to depression. Heredity factors might play an important role as well(1).

Major depressive disorder

To reach an accurate diagnosis, five of the following symptoms should have be present for at least two weeks: depressive mood, weight loss or gain (more than 5% of body weight), loss of pleasure in all or almost all activities, diminished interest, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue, feelings of worthlessness, reduced ability to concentrate, recurrent thoughts of death or suicide. The syndrome leads to distress or functional impairment.

Minor depressive disorder

In this type of depression, at least two but fewer than five of the symptoms of major depressive disorder must be present, which should last at least 2 weeks. This diagnosis can only be made in patients without a history of major depression, dysthymia, bipolar, or psychotic disorders(1,6).

Risk factors for depression in later life

According to previous studies, some factors, such as increasing age, low education, marital status (divorce, spouse's death), cognitive impairment, poor health, low socioeconomic status, living alone could have effective influences on occurrence of depression but researchers have not found statistical significance associated with new medical illnesses and occurrence of depression. Furthermore, some risk factors related to the past, including childhood abuse, adoption of hazardous lifestyle practices (e.g., alcohol abuse, smoking, physical inactivity, obesity), poor social support, financial strain, lack of a confidant, chronic medical problems, and significant life events (e.g., death, divorce) may all contribute to increasing the risk of depression in later life(1,7).

Keywords: Depression; Elderly; depressive disorder.
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References

1. Alexopoulos, G.S., 2005. Depression in the elderly. The lancet, 365(9475), pp.1961-1970.
2. Almeida, O.P., 2014. Prevention of depression in older age. Maturitas, 79(2), pp.136-141.
3. Casey, D.A., 2017. Depression in Older Adults: A Treatable Medical Condition. Primary care, 44(3), p.499.
4. Blazer, D.G., 2003. Depression in late life: review and commentary. The Journals of Gerontology Series A: Biological Sciences and Medical Sciences, 58(3), pp.M249-M265.
5. Charney, D.S., Reynolds, C.F., Lewis, L., Lebowitz, B.D., Sunderland, T., Alexopoulos, G.S., Blazer, D.G., Katz, I.R., Meyers, B.S., Arean, P.A. and Borson, S., 2003. Depression and Bipolar Support Alliance consensus statement on the unmet needs in diagnosis and treatment of mood disorders in late life. Archives of general psychiatry, 60(7), pp.664-672.
6. Brown, E.S., Varghese, F.P. and McEwen, B.S., 2004. Association of depression with medical illness: does cortisol play a role?. Biological psychiatry, 55(1), pp.1-9.
7. Cole, M.G., 2000. Recurrence of geriatric depression. American Journal of Psychiatry, 157(7), pp.1183-a.

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