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Treatment of Asthma Using Alternative Medicines - A Review

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ABSTRACT

There is sufficient published evidence to suggest that some forms of alternative medicine have measurable therapeutic effects for the treatment of Asthma. There is also widespread enthusiasm among the public for alternatives to traditional medical treatment" and sufficient interest from clinicians, especially general practitioners, to make it important for the subject to be examined critically. Alternative medicines like Acupuncture, Herbal medicines and Supplements, Yoga and Breathing Techniques, Regular exercise and Relaxation, Homeopathic Remedies, Diet/ Nutritional therapies, Naturopathy, Psychological Therapies, Hypnosis and Osteopathy can no longer be ignored by academia. Some studies with evidences prove the potential of Alternative Medicine in treatment of Asthma. Whereas some of them require the more investigation and studies. With the ability to relieve the symptoms of Asthma, Alternative Medicine have risk of side-effects ranging from mild, moderate and sometime sever to life threatening. Public awareness for the possibility of side effects of Alternative medicines should be enhanced.

INTRODUCTION

Asthma is a chronic inflammatory disease. It is a disease characterized by reversible airflow obstruction in respiratory airways, chest tightness, wheezing, shortness of breath, bronchospasm, mutable and periodic symptoms. Genetic factor or environmental factor or others plays the significant role in the incidence of Asthma. Mostly the asthma patients rely on traditional medical treatment to prevent and relieve symptoms but certain alternative medicines or treatments also may help to relieve asthma symptoms. Increasing numbers of Asthma patients are attracted towards Alternative medicine. Alternative medicine can no longer be ignored by academia [1-10].

Alternative Medicines are used as a substitute for traditional medical therapy. There are several alternative medicines which can be used in the treatment of Asthma.

Acupuncture

Acupuncture involves the stimulation of certain points on the body, often with needles or electrodes, to improve health and well-being. Some of the studies support the acupuncture treatment for Asthma and most others demonstrating no benefit. In one study the benefit of acupuncture was short lived and unimpressive and failed to

find any long term benefit [11-16]. In China it is often used as additional treatment in acute asthma when response to traditional medicines has proved disappointing. Acupuncture treatment in asthma has no clear conclusion as there is minimal scientific evidence to support its efficacy [17-22].

Herbal Medicines and Supplements

Herbal Medicines includes herbs and herbal preparation used to maintain the health and to treat the medical condition. There are many over-the-counter herbs and dietary supplements have been shown to relieve asthma symptoms [23-29]. Khella and Lobelia are the herbs for asthma. Khella, usually known as bishop's weed, is a vasodilator and a bronchial dilator. It is useful to use Khella daily as recommended for preventing or minimizing acute attacks. Lobelia has the ability to give immediate relief during the periods of excess congestion and breathing difficulties normally associated with asthma. Ginkgo extract has been shown to reduce inflammation [30-39].

Yoga and Breathing Techniques

Yoga is an ancient Hindu discipline. It increases the mental and physical control of the body. Pranayama is one of the aspects of Yoga [40-46]. It is helpful in asthma because it deals with control of respiratory rate and rhythm. Breathing techniques like Pranayama and Buteyko are aimed at reducing hyperventilation and regulating breathing. It may help asthma patients by teaching them to expand the lungs, promote deep breathing and reduce stress. In some studies, people who did breathing exercises reported improvement in symptoms.

Regular Exercise and Relaxation

Few years ago, the practice of exercises by asthma patients was strongly discouraged, because asthmatics could present bronchospasm induced by exercise. On the other hand now a day asthmatic patients are strongly encouraged to do aerobic exercise [47-50]. The growing number of clinical and experimental studies showing that the regular practice of aerobic exercises in appropriate manner and frequency results in several physical and psychological benefits to asthmatic patients. Some patients reported the decrease in daily use of inhaled steroids. It shows an anti-inflammatory effect of exercise on asthmatic lungs. The type of exercise, the amount of time spent exercising and the intensity of exercise are important. This is an exciting research field for more investigation regarding the effects of aerobic exercise for asthma. A recent review published on relaxation therapies with evidence that muscular relaxation improves the lung function of patients with asthma. But there is no evidence available for any other relaxation technique. Regular exercise and muscular relaxation may have some potential in Asthma but more investigations and studies require for firm conclusion [51-54].

Homeopathic Remedies

Homeopathy is one of the most extensive and debatable therapy of Alternative medicine. The best known homeopathic approach is "like cured like" (Isopathy). Traditional homeopathy uses unusual drugs, such as bryony, sabadilla, spikenard, and burnt sponge for asthma [55-59]. In a meta-analysis combining data from two studies on asthma isopathy showed a significant effect on asthma. The currently available evidence is insufficient to reliably assess the possible role of homeopathy in the treatment of asthma.

Diet/Nutritional Therapies

From the different studies, correlations have been observed between fresh fruit consumption and lung function, and between antioxidant vitamin intake and ventilator function of patient. Lower incidences of wheezing and bronchial hyperresponsiveness associated with intake of Vitamin C. Epidemiological studies recommend that marine fatty acids (fish oil) rich diet may have beneficial effects on inflammatory conditions [60-63].

Caffeine is chemically related to theophylline and shows weak bronchodilator effects. It is being found in coffee, tea and flavoured soft drinks. Caffeine is extensively consumed throughout the world. Hence, interest has been raised in the potential of caffeine as an asthma treatment. However all physicians dealing with asthmatic patients should have a working knowledge of food allergy and intolerance [64-69].

Naturopathy

Naturopathy is a system that relies on healthy living to enhance the body's natural ability to resist disease and recover from illness. In the specific case of asthma, Naturopathic therapies focus on defining which allergens might be triggering the asthmatic condition and instantaneously restoring the balance of the immune system.

Naturopathic treatment of asthma to be designed individually based upon a thorough analysis of a physical exam, personal health history, current health problems and current medications. These treatments may include ozone therapy, diet supplements, herbal products, nutritive supplements, soft tissue work, ultraviolet blood irradiation, joint manipulation and injection therapies. Naturopathic Medicine helps the body to overcome functional health disturbances, reinstate health and eliminate disease. Naturopathic medicines approach in a way to decrease asthma's impact on day to day activities and increase quality of life. However there is no strong evidence available for the use of these approaches in Asthma [70-74].

Psychological Therapies

A number of studies have checked the efficacy of psychological therapies at improving various aspects of asthma control or quality of life. Psychological therapies include behavioral therapies, cognitive therapy, relaxation techniques, psychodynamic psychotherapies, counseling, family therapy, breathing retraining and many more. Such therapy experiences may be expected to increase patients' tolerance to disease and to help them to control unfavorable psychological reactions that might contribute to the escalation of the symptomatic reactions that result from exposure to stress [75-78]. In spite of the studies of various psychological approaches in asthma, there are no adequately powered studies of one therapy to pull conclusions regarding the utility of these approaches for improving asthma condition [79-84].

Hypnosis

Hypnosis is an artificially induced trance like dream state where susceptible persons become more alert, attentive and open to suggestion. Hypnosis has been used clinically to treat a variety of conditions that are refractive to traditional medical based therapies. Asthma is often but not always a response to triggers such as weather conditions, pollen, mites, animals, dust, fumes or certain foods. Sometimes the condition asthma is when the trigger is anything except an allergy – factors such as stress, arguments, social occasions even laughter [85-92]. In such situation self-meditation helps the persons to remain calm and be able respond and deal with it appropriately. Existing data shows that people with asthma who are highly susceptible to hypnotherapy are likely to see significant benefits from hypnosis. Children respond very positively to using hypnosis to treat asthma.

Osteopathy

Osteopathy works on the aspects of breathing mechanism, including the ribs, spine, diaphragm and other muscles of breathing. A totally effective respiratory cycle can be achieved by increasing the flexibility of the thoracic cage and thoracic spine to allow for full excursion of the rib cage and lungs.

Osteopathy also helps in the nerve control of the chest as well as blood and fluid supply to the bronchi and lungs. It can also play an important preventative role in the care of Asthma Patient [93-96]. Osteopathy works with the body's structure, to enhance and improve the breathing mechanism by releasing restrictions of the chest and ribs, relaxing the respiratory muscles. It improves lymphatic draining from the lungs and air passages and enhances blood supply to the chest region.

Osteopathy benefits have been endorsed to several factors including an autonomic nervous system changes that relax the airways, smooth muscle tone and decrease in anxiety which automatically improve chest wall biomechanics.

Side-effects of Alternative Medicine

Alternative medicine may lead to considerable risk of side effects some time sever to life-threatening events.

- The potential sensitizing capacity of numerous herbal remedies may
- Lead to allergic contact dermatitis.
- Adverse clinical effects for herbal drugs are ranging from photosensitization, allergic skin reactions and the Stevens–Johnson syndrome to toxic dermatitis.
- Many of the children receiving strict alternative diets suffer from atopic dermatitis.
- Organ toxicity has been observed in liver, kidneys, and the heart associated with various herbal preparations.
- Mechanical injuries may be observed following acupuncture leading spinal injury or cardiac tamponade.
- Infectious complications after acupuncture include hepatitis and bacterial endocarditis.

- Typically, vigorous physical activity for more time in cold, dry air is more likely to trigger asthma.

Public awareness about the possibility of adverse/side effects of Alternative medicines should be enhanced. Hence caution is necessary when using Alternative medicine. Choose the method only if the benefit of a therapy is proven, the side-effects are established and the benefit outweighs the risks [97-100].

CONCLUSION

Numerous alternative therapies have been used in asthma. This review has tried to show the different alternative medicines available in the treatment of Asthma. Some techniques like acupuncture, Herbal medicines, Yoga and hypnosis are having evidences from studies to be effective in the treatment of Asthma. However, the lack of evidence for other alternative medicines does not signify that treatment is ineffective, but it could mean that effectiveness has not been investigated by appropriate Methods or more investigation and research is desirable.

REFERENCES

1. Anisha S, et al. Asthma Management. RRJMHS. 2015;4.
2. Huang ST, et al. The Importance of Continuity of Care in Children with Asthma. Gen Med. 2016;4:243.
3. Leung TF, et al. Personalized Medicine for Severe Asthma: How Far Have We Achieved? J Pharmacogenomics Pharmacoproteomics. 2015;6:148.
4. Albarran, et al. Guidelines and Asthma: Some Considerations for Third World Countries. J Pulm Respir Med. 2015;5:253.
5. Dalamagka, et al. Systematic Review: Acupuncture in Chronic Pain, Low Back Pain and Migraine. J Pain Relief. 2015;4:195.
6. Miao Q, et al. Anti-Inflammatory Effects of Chinese Herbal Medicine on COPD: A Systematic Review. Lung Dis Treat. 2016;2:107.
7. Hassan, et al. Overview at Asthma. Nat Prod Chem Res. 2013;1:e103.
8. de Souza A, et al. Asthma and Environmental Indicators: A Time-series Study. J Allergy Ther. 2016;7:232.
9. Steurer-Stey C, et al. Complementary and alternative medicine in asthma: do they work? Swiss Med Wkly. 2002;132:338-344.
10. Slader CA, et al. Complementary and alternative medicine use in asthma: Who is using what? Respirology. 2006;11:373-387.
11. Lane DJ, et al. Alternative and complementary medicine for asthma. Thorax. 1991;46:787-797.
12. Donna M. Graham, at al. Complementary/alternative medicine in the treatment of asthma. Ann Ale Ast Simm. 2000;85:438-449.
13. Vieira R, et al. Has Aerobic Exercise Anti-inflammatory Effects for Asthma? J Nov Physiother. 2012;2:e108.
14. Panagiotakos, et al. Obesity and Asthma: Is Diet a Therapeutic Mean? J Aller Ther. 2012;3:e105.
15. Irwin Ziment, at al. Alternative medicine for allergy and asthma. J Allergy Clin Immunol. 2000;106:603
16. Volovitz B, et al. Presence and Treatment of Asthma Exacerbation in Infants and Children. Pediat Therapeut. 2016;6:276.
17. Niggemann B, at al. Side-effects of complementary and alternative medicine. Allergy. 2003;58:707-716.
18. Chikezie PC, et al. Herbal Medicine: Yesterday, Today and Tomorrow. Altern Integr Med. 2015;4:195.
19. Malki AM, et al. Herbal Medicine: Is it Really Safe? J Genet Syndr Gene Ther 2012;3:e110.
20. Sultan A, et al. Allopathy Versus Homeopathy: A Never Ending Tacit War. Med Chem (Los Angeles) 2016;6:239-240.
21. Maksimadzhi L, et al. Alternative Medicine. Med Aromat Plants 2016;S3:009.
22. Wiwanitkit V, et al. Pain Management by Meditation: A Naturopathy Approach. J Pain Manage Med 2016;2:e102.
23. Sung PS, et al. New Perspective: Outcome Measurement Indices for Yoga Therapy. J Yoga Phys Ther. 2014;4:157.

24. Mincarini M, et al. Allergen Specific Immunotherapy in Asthma. *J Allergy Ther.* 2014;5:190.
25. Farid Shafei H. Quality of Life in Some Asthmatic Children Treated with Homeopathic Remedies and their Parents. *J Homeop Ayurv Med.* 2014;3:159.
26. Vishvender S, et al. Preventive and Curative Aspect of Yoga in Management of Asthma in Children. *J Homeop Ayurv Med.* 2014;3:152.
27. Beasley, et al. The International Study of Asthma. Worldwide variation in prevalence of symptoms of asthma, allergic rhinoconjunctivitis and atopic eczema: ISAAC. *The Lancet* 351. 1998;9111:1225-1232.
28. Torgerson DG, et al. Meta-analysis of genome-wide association studies of asthma in ethnically diverse North American populations. *Nature Genetic.* 2011;43.9:887-892.
29. Fitzpatrick, et al. Heterogeneity of severe asthma in childhood: confirmation by cluster analysis of children in the National Institutes of Health/National Heart, Lung, and Blood Institute Severe Asthma Research Program. *J Allergy Clin Immunol.* 2011;127.2:382-389.
30. Wallace LA, et al. Particle concentrations in inner-city homes of children with asthma: the effect of smoking, cooking, and outdoor pollution. *Envi Health Per.* 2003;111.9:1265.
31. Fitzpatrick AM, et al. Features of severe asthma in school-age children: atopy and increased exhaled nitric oxide. *Jour of Alle and Clin Imm.* 2006;118.6:1218-1225.
32. Daniels SE, et al. A genome-wide search for quantitative trait loci underlying asthma. *Nature.* 1996;383:247-250.
33. Masoli M, et al. The global burden of asthma: executive summary of the GINA Dissemination Committee report. *Allergy.* 2004;59.5:469-478.
34. Sears MR, et al. Regular inhaled beta-agonist treatment in bronchial asthma. *The Lancet.* 1990;336.8728:1391-1396.
35. Foliaki S, et al. Antibiotic use in infancy and symptoms of asthma, rhinoconjunctivitis and eczema in children 6 and 7 years old: International Study of Asthma and Allergies in Childhood Phase III. *J Allergy Clin Immunol.* 2009;124.5:982-989.
36. Asher MI, et al. Worldwide time trends in the prevalence of symptoms of asthma, allergic rhinoconjunctivitis, and eczema in childhood: ISAAC Phases One and Three repeat multicountry cross-sectional surveys. *The Lancet.* 2006;368.9537:733-743.
37. Bousquet, et al. Allergic rhinitis and its impact on asthma (ARIA). *Allergy.* 2008;63.s86:8-160.
38. Weitzman, et al. Maternal smoking and childhood asthma. *Pediatrics.* 1990;85.4:505-511.
39. Siroux, et al. Phenotypic determinants of uncontrolled asthma. *J Allergy Clin Immunol.* 2009;124.4: 681-687.
40. American Thoracic Society. Standards for the diagnosis and care of patients with chronic obstructive pulmonary disease (COPD) and asthma. *Am. Rev. Respir. Dis.* 1987;136:225-244.
41. Peat, et al. Rate of decline of lung function in subjects with asthma. *Eur J Resp Dis.* 1987;70.3:171-179.
42. Hamid, et al. Induction of nitric oxide synthase in asthma. *The Lancet* 342. 1993;8886:1510-1513.
43. Johnston, et al. Community study of role of viral infections in exacerbations of asthma in 9-11 year old children. *BMJ* 310. 1995;6989:1225-1229.
44. Juniper, et al. Development and validation of a questionnaire to measure asthma control. *Eur Resp J.* 1999;14.4:902-907.
45. Barnes, et al. Inflammatory mediators and asthma. *Pharmacological Reviews.* 1988;40.1:49-84.
46. Broide, et al. Cytokines in symptomatic asthma airways. *J Allergy Clin Immunol.* 1992;89.5:958-967.
47. Crane, et al. Prescribed fenoterol and death from asthma in New Zealand, 1981-83; Case-control study. *The Lancet.* 1989;333.8644:917-922.
48. Woolcock, et al. Evidence for the increase in asthma worldwide. *Ciba Foundation Symposium 206-The Rising Trends in Asthma.* John Wiley & Sons, Ltd.;1997.
49. Bousquet, et al. Eosinophilic inflammation in asthma. *New England Journal of Medicine.* 1990;323.15:1033-1039.
50. Keatings, et al. Differences in interleukin-8 and tumor necrosis factor-alpha in induced sputum from patients with chronic obstructive pulmonary disease or asthma. *American journal of respiratory and critical care medicine.* 1996;153.2:530-534.
51. Lundbäck, et al. Epidemiology of rhinitis and asthma. *Clinical and experimental allergy: British Allergy Clin Immunol.* 1998;28:3-10.

52. Peat, et al. House dust mite allergens. A major risk factor for childhood asthma in Australia. *Am J Respir Crit Care Med.* 1996;153.1:141-146.
53. Frigas, et al. Elevated levels of the eosinophil granule major basic protein in the sputum of patients with bronchial asthma. *Mayo Clinic Proceedings.* 1981;6.
54. Foster, et al. Interleukin 5 deficiency abolishes eosinophilia, airways hyperreactivity, and lung damage in a mouse asthma model. *J Exp Med.* 1996;183:195-201.
55. Green, et al. Asthma exacerbations and sputum eosinophil counts: a randomised controlled trial. *The Lancet.* 2002;360.9347:1715-1721.
56. Gibson, et al. Chronic cough: eosinophilic bronchitis without asthma. *The Lancet.* 1989;333.8651:1346-1348.
57. Turner-Warwick, et al. Epidemiology of nocturnal asthma. *Am J Med.* 1988;85.1:6-8.
58. Rabe, et al. Clinical management of asthma in 1999: the Asthma Insights and Reality in Europe (AIRE) study. *Eur Respir J.* 2000;16.5:802-807.
59. Burr, et al. Changes in asthma prevalence: two surveys 15 years apart. *Archives of disease in childhood.* 1989;64.10:1452-1456.
60. Pin, et al. Use of induced sputum cell counts to investigate airway inflammation in asthma. *Thorax.* 1992;47.1:25-29.
61. Inan MI, et al. Effort Dyspnea, if it is not Asthma? An Omega Epiglottis Case Report. *J Clin Case Rep.* 2016;6:813.
62. Shu-Tzu Huang, et al. The Importance of Continuity of Care in Children with Asthma. *Gen Med (Los Angeles).* 2016;4:243.
63. Gadge PB, et al. Automatic Wheeze Detection System as Symptoms of Asthma Using Spectral Power Analysis. *J Bioengineer Biomedical Sci.* 2016;6:191.
64. Kraszula L, et al. The Relationship between Leptin, Adiponectin, Resistin and FoxP3+ Treg cells in Patients with Severe Asthma. *J Clin Cell Immunol.* 2016;7:426.
65. Naveed S, et al. Health-Related Quality of Life in Patients with Asthma, Survey based Study in Karachi, Pakistan. *J Bioequiv Availab.* 2016;8:179-184.
66. Xiaoyu M, et al. Magnesium Sulfate Combined Montelukast Sodium Clinical Observation on Treatment of Infantile Asthma. *Neonat Pediatr Med.* 2016;2:108.
67. Hassan AA, et al. Knowledge and Attitude of Oncology Practitioners towards Complementary and Alternative Medicine for Cancer Care in Qatar. *J Anesth Clin Res.* 2015;6:561.
68. Jahan F, et al. Medical Students Knowledge and Perception Regarding Complementary and Alternative Medicine. *J Health Edu Res Dev.* 2015;3:135.
69. Sexton-Radek K, et al. Alternative Medicine/Supplement Use to Induce Sleep: A Global Perspective. *J Sleep Disord Ther.* 2015;S1:002.
70. Hassan A, et al. Knowledge, Attitudes and Practices of Oncology Nurses towards Complementary and Alternative Medicine for Cancer Care in Qatar. *J Anesth Clin Res.* 2014;5:477.
71. Sharma A, et al. Complementary and Alternative Medicine (CAM) Use among Patients Presenting in Out-patient Department at Tertiary Care Teaching Hospital in Southern Rajasthan, India - A Questionnaire Based Study. *Altern Integr Med.* 2015;4:187.
72. Ventegodt MD, et al. Evidence-based Medicine: Alternative Medicine [Non-drug Medicine, CAM] versus Pharmacological Medicine. *Altern Integr Med.* 2015;4:e116.
73. Kishore L, et al. Role of *Gymnema sylvestre* as Alternative Medicine. *J Homeop Ayurv Med.* 2015;3:172.
74. Hernandez TD, et al. Acupressure as a Model for Complementary and Alternative Medicine (CAM) Treatment Following Acquired Brain Injury: Translating Lessons from the Laboratory. *Int J Phys Med Rehabil.* 2015;3:269.
75. Kunnoor NS, et al. Physicians Perception on Complementary and Alternative Medicine (CAM): A Cross Sectional Survey at Tertiary Care Hospital in India. *Med chem.* 2015;5:197-202.
76. Zappaterra CW, et al. Healthy Aging: A Review of Complementary and Alternative Medicine Modalities that Increase Quality of Life in Older Adults. *J Yoga Phys Ther.* 2014;4:164.
77. Parikh R, et al. A Short Review: Complementary and Alternative Medicine in Lung Cancer. *J Anc Dis Prev Rem.* 2014;2:115.

78. Tam K, et al. Attitudes of Alberta Pharmacists Pertaining to Traditional Chinese Medicine Practice and Complementary Alternative Medicine. *J Pharma Care Health Sys.* 2014;1:108.
79. Chhabi R, et al. Changing Pattern of Complementary and Alternative Medicine in Tikapur Nepal: A Hope for Future Health. *Altern Integr Med.* 2014;3:153.
80. Udo IA, et al. Clinical and Socio Demographic Profiles of Complementary and Alternative Medicine Users among Outpatient Clinic Attendees in Uyo, South-South Nigeria. *Fam Med Med Sci Res.* 2014;3:117.
81. Witt-Enderby PA, et al. Complementary and Alternative Medicine: Why hasn't the Science Kept Up with the Demand? *Clin Pharmacol Biopharm.* 2013;3:e115.
82. Omar OM, et al. Alternative Medicine: Implications on Dentistry. *Altern Integr Med.* 2013;1:e103.
83. Cui Y, Open Communication between Patients and Doctors about Complementary and Alternative Medicine Use: The Key to Avoiding Harmful Herb- Drug Interactions among Cancer Patients. *Altern Integr Med.* 2013;2:e107.
84. Kamizato M, et al. Nurses' Use of Complementary Alternative Medicine for Cancer Patients in Japan. *J Nurs Care.* 2013;S5:011.
85. Ismahanisa W, et al. Complementary and Alternative Medicines (CAM) and its Role in Thalassemia Treatment. *Altern Integr Med.* 2013;3:e111.
86. Panda AK, et al. Complementary and Alternative Medicine is Mother Medicine. *Altern Integr Med.* 2013;3:e112.
87. Long AF, et al. Complementary and Alternative Medicine (CAM) and the Public Health: an Innovative Healthcare Practice in Supporting and Sustaining Health and Well-Being. *Epidemiol.* 2013;4:141.
88. Kumar D, et al. Rationale of Integration of Complementary and Alternative Medicine (CAM) Health Facilities in Non Communicable Disease (NCDs) Surveillance, North India. *J Community Med Health Educ.* 2012;2:147.
89. Posadzki P, et al. Prevalence of Complementary and Alternative Medicine-use by UK Cancer Patients: A Systematic Review of Surveys. *J Integr Oncol.* 2012;1:102.
90. Jamale T, et al. Acute Kidney Injury Due to Arsenic Contained in Alternative Medicines in the Setting of Adult Nephrotic Syndrome. *J Clinic Toxicol.* 2011;1:101.
91. Drofenik M, et al. A Homeopathy Model in the Light of Hahnemann's Pristine Idea. *Altern Integr Med.* 2016;5:214.
92. Sekonyela TV, et al. Scientific Basis of Homeopathic Medicine: A Hypothesis to Establish the Scientific Basis of Homeopathy. *J Tradi Med Clin Natur.* 2016;5:185.
93. Bhattacharya A, et al. Role of Homeopathy in Integrative Cancer Care. *J Carcinog Mutagene.* 2015;6:e118.
94. Hamilton IF, et al. The Role of Artistic Expression in Deciding on a Homeopathic Prescription, with Special Reference to Working with Practicing Artists. *Altern Integr Med.* 2015;4:205.
95. Ibrahim SE, et al. Acupuncture versus Homeopathy as a Complementary Therapy in Patients with Knee Osteoarthritis. *Int J Phys Med Rehabil.* 2015;3:259.
96. Rajalakshmi MA, et al. Demystifying Homeopathy: In the Light of Nano- Science. *J Homeopat Ayurv Med.* 2012;1:e104.
97. Singh A, et al. Scope of Open Access Journals in Boosting Scientific Validation of Homeopathy and Ayurvedic Medicine. *J Homeop Ayurv Med.* 2012;1:e107.
98. Batra M, et al. Attention-Deficit Hyperactivity Disorder and Homeopathy. *J Homeop Ayurv Med.* 2013;2:116.
99. Batra M, et al. Heart Health and Homeopathy. *J Homeop Ayurv Med.* 2013;2:135.
100. Tóké B, et al. Golden Ratio and the Fibonacci Series in the Homeopathy Theory and Practice. *Altern Integr Med.* 2014;3:149.
101. Gabriella HH, et al. Attitudes of Hungarian Healthcare Professionals (Mds, Nurses) According To Cam Homeopathy: A Cross-Sectional, Qualitative Accumulated Survey's Data. *Altern Integr Med.* 2014;3:162.
102. Harrison H, et al. Editorial for 'Homeopathy and Ayurveda': 'Evidencebased Homeopathy'. *J Homeopat Ayurv Med.* 2012;1:e103.
103. Regalia P, et al. Parents Concerned about Vaccines do have Another Choice. *J Homeopat Ayurv Med.* 2012;1:106.