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Effects of Red Ginger (*Zingiber officinale var rubrum*) to Improve Lung Function in reducing the risk of COVID-19 in Stable COPD Patients

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ABSTRACT

Chronic obstructive pulmonary disease (COPD) is a major global health problem and has an impact on increasing healthcare costs and decreasing productivity. The use of natural therapy in the treatment of chronic diseases is an opportunity for Indonesia as a tropical country that has many variations of plants that have the potential to become herbal medicines. Infusion red ginger (Zingiber officinale var. rubrum) is one of the most widely consumed medicinal plants in Indonesia. This study at to determine the effectiveness of improving lung function in red ginger infusion in increasing the value of forced expiratory volume in 1 second (FEV1) and forced vital capacity (FVC) in COPD patients. The research method used was pre-post design in May until September 2021. Respondents were adult COPD patients domiciled in Mojoanyar districts, Mojokerto City. The study was conducted by examining lung function, then continued with 250 grams of red ginger steeping therapy for 4 months. Data analysis to examine the effectiveness of improving lung function in red ginger infusion in increasing the value of FEV1/FVC in COPD patients using t-test. Respondents used in this study were 21 people. The average age of the respondents was 53.24 years. The normality test showed that the average per month all data were normally distributed (Pvalue>0.05). Then continued with the t-test showing that there is a significant change every month (P value=0.000). Infusion of red ginger for 4 months was proven to be effective in increasing lung function from the parameter values of FEV1/FVC significantly.

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1. INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a major global health problem with an increasing disease burden and impact on health care spending. COPD is an irreversible airflow limitation. Conventional treatment is currently aimed at relieving symptoms, preventing recurrent exacerbations, maintaining optimal lung function and improving quality of life [1]. According to World Health Statistics, COPD will be the third leading cause of death in the world in 2030. Based on data obtained from Basic Health Research

(2013), COPD has a prevalence of 3.7% per one million population in Indonesia [2]. COPD has become like a ticking time bomb in Indonesia, because there are many conditions in the community with very high risk of COPD with impaired lung function but are not aware of it [3], [4]. COPD is a chronic disease that requires long-term therapy. Synthetic treatments are not always safe, and often lead to undesirable effects [5- 7] and medication nonadherence [8], [9]. The unsatisfactory treatment outcomes of conventional medicine, and the side effects associated with some drug classes, such as steroids and theophylline, have contributed substantially to the increasing popularity of complementary and alternative medicine and, in particular, herbal medicine [10], [11].

Patients with COPD have a higher prevalence of coronary ischemia and other factors that put them at higher risk for COVID-19-related complications. Several observational and case-control studies have confirmed a higher prevalence of cardiovascular disease in COPD patients than in the general population, possibly due to shared risk factors or associated pathogenic mechanisms. Despite major differences in studies evaluating the association between COPD and cardiovascular disease, COPD patients undoubtedly have a higher prevalence of coronary ischemia and other risk factors that may worsen the prognosis of COVID-19. Of the 31,633 COPD patients, 793 had a diagnosis of COVID-19. The proportion of patients with COVID-19 in the COPD population was significantly higher than in the general population aged >40 years. COPD was associated with a higher risk for poor disease outcome (combined end points included admission to an intensive care unit, invasive ventilation, or death), as reflected by a hazard ratio (HR) of 2681 (95% CI 1424–5,0480), after adjusting for with age and smoking. Compared with non-COPD individuals, COPD patients with COVID-19 exhibit a much poorer disease prognosis, as evaluated by hospitalization and mortality. Patients with COPD and COVID-19 had more comorbidities than non-COPD patients. Pneumonia was the most common diagnosis among COPD patients hospitalized for COVID-19 (59%); 19% of patients showed pulmonary infiltrates suggestive of pneumonia and heart failure. COPD patients with COVID-19 show higher rates of hospitalization and mortality, mainly related to pneumonia [12].

A strong immune system can help increase the body's resistance so as to reduce the risk in the midst of the COVID-19 pandemic [13], [14]. Chronic lung diseases such as COPD and asthma are at high risk of developing serious conditions if infected with COVID-19 [15- 17]. Data in the world show that 70% of deaths are caused by non-communicable diseases, such as asthma and COPD which account for 15% of deaths worldwide [18]. Chronic lung diseases (COPD, asthma, pulmonary fibrosis and lung cancer) are at high risk of developing serious conditions if infected with COVID-19. Patients with severe and/or uncontrolled asthma/COPD are at higher risk for more severe infections [13], [14].

Indonesia as a tropical country, has many variations of plants that have the potential to be herbal medicines. One of the plants that are commonly found is ginger (Zingiber officinale) [13]. Ginger (Zingiber officinale Roscoe) is a common and widely used spice. The health benefits of ginger are mainly attributed to its phenolic compounds, such as gingerols and shogaols [14]. Red ginger (Zingiber officinale var. rubrum) has higher anti-inflammatory and antioxidant properties than other types of ginger [15]. Red ginger is one of the most widely consumed medicinal plants in Indonesia. Red ginger contains phenolic compounds, namely gingerols and shogaols which show the greatest anti-inflammatory and antioxidant activity compared to other gingerols. Pharmacokinetic studies on ginger have been reported, but studies on red ginger are still lacking [16- 18]. Therefore, the preparation of red ginger can be a good opportunity in developing the potential of natural ingredients in Indonesia for the treatment of COPD. The antioxidant effect of ginger can help reduce the severity of lung function. COVID-19 patients are at a higher risk of developing the inflammatory response associated with serious and even fatal respiratory disease. Pulmonary inflammation, fever and fibrosis are symptoms of COVID-19 mediated by pro-inflammatory cytokines. Oxidative stress

affects the repair mechanism and immune control system, which is one of the main events of the inflammatory response which allows us also to conclude that oxidative stress is the main factor that increases the severity of COVID-19 especially during chronic disease associated with fragility. antioxidant system, suggesting to recommend antioxidant supplementation in a therapeutic strategy against COVID-19 [19]. In addition, ginger and its active components induce bronchodilation by modulating intracellular calcium ([Ca2+]i) in airway smooth muscle (ASM). In isolated human ASM, ginger caused significant and rapid relaxation. The purified ginger constituents were then tested for the relaxant properties of ASM in guinea pigs and the human trachea, namely gingerol, gingerol, and shogaol induce rapid relaxation of precontraction ASM (100–300 M), thus ginger may attenuate airway hyperresponsiveness, in part by altering ([Ca2+]i) [20]. Red ginger preparations commonly used in Indonesia are in the form of steeping. Ginger decoction is made by inserting 50 mg of ginger into 200 mL of water, boiled until the water volume becomes 100 mL [21]. Therefore, the antioxidant and anti-inflammatory effects of red ginger in addition to helping reduce the effect of reducing the risk of COVID-19 severity, can also help improve lung function. Pathogenic factors of COPD causing disease include infection and inflammation, protease and antiprotease imbalances, and oxidative stress that overwhelms antioxidant defenses. Smoking serves as a major risk factor for developing COPD and is also a major source of oxidants/reactive oxygen species (ROS) to the lungs and body in exposed individuals [22], [23].

Airflow limitation in COPD by causing chronic inflammation, structural changes, narrowing of the small airways, and damage to the lung parenchyma. This causes loss of alveolar attachment to the small airways resulting in decreased lung elasticity. This decrease in lung elasticity reduces the ability of the airways to remain open during expiration. Loss of small airways can also lead to airflow limitation and mucociliary dysfunction that characterize the disease [24]. This limitation of air can be measured by spirometry. Spirometry is a measure of lung function used to assess the severity of airway limitations based on FEV1 and FVC. The spirometry criteria for airflow limitation on post-bronchodilator measurements were FEV1 (forced expiratory volume 1 second) and FVC (forced vital capacity) ratio<0.70 [25- 27]. This study aimed to determine the effectiveness of improving lung function in red ginger infusion in increasing the value of FEV1/FVC in COPD patients.

2. METHODS

The design of this research was pre post design in May until September 2021. The variables were lung function by forced expiratory volume in 1 second (FEV1) and forced vital capacity (FVC). Lung function can be measured through spirometry measurements by FEV1/FVC ratio value, where an FEV1 value of <70% can be said to have impaired lung function. The value of FEV1/FVC was good if the results show ≥0.7 [28], [29]. The requirements that must be considered by each respondent before pulmonary function tests are carried out are as follows: No smoking for an hour before test; Didn't consume alcohol for the previous 4 hours before test; Not doing sports activities for the previous 30 minutes before test; Didn't eat for 2 hours before test; Didn't wear tight clothes; and no medication was taken before [30]. Measurement of lung function using a handheld spirometer where body mass index (BMI) data in the form of weight and height and respondent data in the form of gender, age, smoker or not are entered into the spirometer. Then the respondent was asked to stand or sit up straight, then the respondent is asked to inhale as deeply as possible through the mouth while closing the nose, then the tube contained in the spirometer is inserted into the mouth, making sure the lips tightly cover the tube wall and the tongue does not cover the tube opening, then breathe out. Exhale as hard and fast as possible in one second until there was no air left in the lungs. Examination with a spirometer can be done 3 times or more to get more accurate results. The results of the spirometer measurement from the respondent will determine whether the respondent has respiratory problems or does not experience respiratory problems based on the FEV1 value. FEV1 value <70% already

indicates respiratory problems. So if the value of FEV1 <70%, then it is categorized in the group of respiratory disorders and FEV1 70% is categorized in the group that does not experience respiratory disorders [31], [32].

The study population was adult COPD patients domiciled in Mojoanyar districts, Mojokerto City. Respondents (study sample) were part of the population with criteria >18 years old, didn't have digestive disorders related to nausea and vomiting, didn't have respiratory problems other than COPD, didn't experienced COPD exacerbations in the last 3 months, and didn't receive incentive care/inpatient in last 3 months.

The study was conducted by examining lung function (FEV1/FVC) (t0), then continued with 250 gram red ginger steeping therapy for 4 months, and pulmonary function examinations were carried out every month (t1, t2, t3, and t4). Data analysis to examine the effectiveness of improving lung function in red ginger infusion in increasing the value of FEV1/FVC in COPD patients using t-test.

3. RESULTS

3.1 Characteristics of Respondents

Respondents used in this study were 21 people. The average age of the respondents was 53.24 years. Most of the respondents had habit >20 cigarette consumption per day (12 of 21) and the most of brinkman index was moderate (19 0f 21) (Table 1). Data on lung function per respondent showed an average monthly increase in lung function (Table 2).

Table 1: Frequency Distribution of Respondents Characteristics

Characteristics		Frequency (n=21)	Percentage (%)
Gender	Male	21	100
Age (years)	36-45	1	4,76
	45-55	13	61,90
	>55	7	33,33
Habit of cigarette consumption per day (cigarette sticks)	1-10	2	9,52
	11-20	7	33,33
	>20	12	57,14
Brinkman Index	Mild (0-200)	2	9,52
	Moderate (200-600)	19	90,48

Table 2: Profile of Lung Function of Each Respondent

No. Respondent	Lung Function (FEV1/FVC) (%)				
	t0	t1	t2	t3	t4
1	81	82	84	85	85
2	82	83	82	84	84
3	45	49	48	48	48
4	52	53	51	53	55
5	72	71	72	72	74
6	71	71	72	71	72
7	50	46	48	50	50
8	71	71	72	73	73
9	70	71	71	71	71
10	71	73	70	71	72
11	45	47	45	46	47
12	56	57	60	60	60

13	70	69	70	70	71
14	67	68	68	68	68
15	61	62	62	61	62
16	53	53	53	55	54
17	55	56	55	56	57
18	59	60	60	60	60
19	61	62	63	63	65
20	57	58	57	58	58
21	57	58	57	58	58
Average	**62,19**	**62,86**	**62,86**	**63.48**	**64.00**

t0: before red ginger therapy
t1: after 1 month receiving red ginger therapy
t2: after 2 months of receiving red ginger therapy
t3: after 3 months of red ginger therapy
t4: after 4 months of red ginger therapy

The normality test showed that the average per month (t0, t1, t2, t3, and t4) all data were normally distributed (Pvalue>0.05) (Table 3). Then continued with the t test showing that there is a significant change every month (P value <0.05) (Table 4).

Table 3: Normality test

Pulmonary Function Examination Time	Shapiro-Wilk Test	
	P value	Conclusion
t0	0.374	P Value>0.05, There were data with normal distribution
t1	0.442	P Value>0.05, There were data with normal distribution
t2	0.528	P Value>0.05, There were data with normal distribution
t3	0.468	P Value>0.05, There were data with normal distribution
t4	0.472	P Value>0.05, There were data with normal distribution

t0: before red ginger therapy
t1: after 1 month receiving red ginger therapy
t2: after 2 months of receiving red ginger therapy
t3: after 3 months of red ginger therapy
t4: after 4 months of red ginger therapy

Table 4: Statistical Test of Changes in Lung Function Values

Pulmonary Function Examination Time	Dependent t-test	
	P value	Conclusion
t0 to t1	0.000	P Value <0.05, There was a significant difference between 2 groups
t0 to t2	0.000	P Value <0.05, There was a significant difference between 2 groups
t0 to t3	0.000	P Value <0.05, There was a significant difference between 2 groups
t0 to t4	0.000	P Value <0.05, There was a significant difference between 2 groups

4. DISCUSSION

This study involved male respondents, because the data from most of the initial studies showed that the risk of patients experiencing COPD and death from COPD was greater for men than women [33], but data from developing countries showed the prevalence of COPD in men and women was the same, which may reflect changes in tobacco smoking patterns [34]. The average age of the respondents was 53.24 years, these structural changes in the aging lung have a clear effect on overall lung function, and several physiological parameters are altered after aging. Both FEV1 and FVC decline with age, and the rate of decline has been

shown to be higher in men than in women. As a consequence of decreased elasticity and compliance of the chest wall, residual volume increases, while vital capacity decreases. Interestingly, total lung capacity did not change with age, because the decrease in recoil elasticity observed with aging was offset by a decrease in chest wall compliance and chest muscle strength. Although the distribution of alveolar ventilation and perfusion in the lungs is highly heterogeneous as a result of a decrease in alveolar surface area, pulmonary capillary density and pulmonary capillary blood volume, the lung's overall transfer capacity for carbon monoxide decreases with age. Clinically, this may predispose to physical activity and the development of respiratory distress during sleep [35].

COPD morbidity can affect other comorbid conditions (such as cardiovascular disease, musculoskeletal disorders, diabetes mellitus), which are also related to smoking status and age. COPD was also more common at the age of >40 years than <40 years, and was more common in males than females. Most of the increase in COPD mortality was due to the growing epidemic of smoking, decreased mortality from other common causes of death such as ischemic heart disease, infectious diseases [1].

Other factors that can affect changes in lung function are:

a. Genetics. A common genetic deficiency is alpha-1 antitrypsin (AAT) deficiency, which is associated with emphysema. The pathophysiology of AAT deficiency is associated with a protease-antiprotease imbalance and an incidence of <1% of COPD cases [1], [36], [37].

b. The risk of exposure to other particles, such as occupational exposures (organic and inorganic dust and chemical agents) is a risk factor for COPD that is not given much attention. A large analysis of the American population of 10,000 adults aged 30-75 years found the fraction of COPD attributable to work was 19.2% of all, and 31.1% of non-smokers [1]. Tobacco smoking was the greatest risk factor for COPD, which has a greater prevalence of respiratory symptoms and lung function abnormalities with reduced FEV1 and mortality compared to non-smokers [1], [38]. This study involved respondents who smoked, but did not analyze further the therapeutic effect of red ginger on lung function.

There are 2 types of cigarettes sold in Indonesia, including kretek cigarettes, namely raw materials or contents in the form of tobacco leaves and cloves which are given a certain taste and aroma effect. Kretek cigarettes contain about 20 mg of tar and 44-45 mg of nicotine, while white cigarettes are the contents of these cigarettes only tobacco leaves which are given a sauce to get a certain taste and aroma effect. White cigarettes contain 14-15mg of tar and 5mg of nicotine. Clove cigarettes are more dangerous than white cigarettes because the nicotine and tar content in kretek cigarettes is higher and kretek cigarettes do not use a filter so that all combustion products from cigarettes will be inhaled and enter the respiratory tract [39], [40]. Tobacco use for a long time is associated with an increased likelihood of developing COPD, frequent productive cough, frequent shortness of breath and can affect physical activity even after controlling the smoking habit. It was also explained that former smokers, who had stopped smoking for 10 years had a lower prevalence of COPD and respiratory symptoms than those who were still smokers. The results showed that the differences in the duration of smoking for less than 10 years, 10 years to 20 years, and more than 20 years in the rickshaw driver respondents were differences in lung function measurements. However, in some respondents this did not happen, perhaps due to the influence of other factors such as age, exposure to harmful particles, and the development of lung function as children. The use of cumulative cigarette consumption in the future can show a consistent relationship between lung disease and non-smokers, former smokers and smokers who are distinguished by the number of cigarettes smoked a day [4]. The Brinkman index is used to see the degree of severity or severity of smoking by using the formula for multiplying the average number of cigarettes smoked a day multiplied by the length of smoking in years. There is a

significant relationship between the degree of smoking and the severity of COPD, and a strong correlation between the two [4], [40].

c. Malnutrition is a common and serious problem in COPD patients, especially those with emphysema. COPD patients with emphysema have a lower body mass index (BMI) than COPD patients with chronic bronchitis [41], [42]. Body weight and BMI are risk factors for mortality in COPD [43]. Malnutrition in COPD is associated with complications and increased mortality. COPD patients with low body weight have lower diffusion and exercise capacities than COPD patients with normal weight. Decreased body cell mass is associated with reduced diaphragm and respiratory muscle mass. Malnutrition is also associated with decreased immune status, so that unwanted complications can occur, such as nosocomial lung infections and hypercapnic pulmonary failure [44].

The effectiveness test of red ginger for handling COVID-19 can be developed by observing the NF-b parameter, which is an important mediator in COVID-19. Hyperactivation of the nuclear factor kappa-light-chain-enhancer of the activated B cell (NF-B) pathway has been implicated in the pathogenesis of the severe/critical COVID-19 phenotype. NF-B is a complex protein system that is present inactive in the cytoplasm along with inhibitory proteins known as NF-B inhibitors (IκBs). Upon stimulation (induction), phosphorylation of IκBs by IκB kinase (IKK) leads to nuclear translocation of NF-B, binds to their cognate DNA and activates transcription of a wide variety of genes involved in host immunity, inflammation, cell proliferation and apoptosis. Inducers of NF-B are highly variable and include bacterial lipopolysaccharides, ionizing radiation, reactive oxygen species (ROS), cytokines such as tumor necrosis factor alpha (TNF-α) and interleukin 1-beta (IL-1β) as well as viral DNA and RNA. Immunomodulation on the level of NF-B activation and inhibitor of NF-B degradation (IκB) together with inhibition of TNF- would potentially result in a reduction in cytokine storm and reduce the severity of COVID-19. Inhibition of the NF-B pathway has a potential therapeutic role in reducing severe forms of COVID-19 [45].

5. CONCLUSION

Infusion of red ginger for 4 months was proven to be effective in increasing lung function from the parameter values of FEV1/FVC significantly.

6. ACKNOWLEDGMENTS

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7. CONFLICT OF INTEREST

The authors have no conflicts of interest regarding this investigation.

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Title : Effects of Red Ginger (Zingiber officinale var rubrum) to Improve Lung Function in reducing the risk of COVID-19 in Stable COPD Patients

Abstract :

Chronic obstructive pulmonary disease (COPD) is a major global health problem and has an impact on increasing healthcare costs and decreasing productivity. The use of natural therapy in the treatment of chronic diseases is an opportunity for Indonesia as a tropical country that has many variations of plants that have the potential to become herbal medicines. Infusion red ginger (Zingiber officinale var. rubrum) is one of the most widely consumed medicinal plants in Indonesia. This study at to determine the effectiveness of improving lung function in red ginger infusion in increasing the value of forced expiratory volume in 1 second (FEV1) and forced vital capacity (FVC) in COPD patients. The research method used was pre-post design in May until September 2021. Respondents were adult COPD patients domiciled in Mojoanyar districts, Mojokerto City. The study was conducted by examining lung function, then continued with 250 grams of red ginger steeping therapy for 4 months. Data analysis to examine the effectiveness of improving lung function in red ginger infusion in increasing the value of FEV1/FVC in COPD patients using t-test. Respondents used in this study were 21 people. The average age of the respondents was 53.24 years. The normality test showed that the average per month all data were normally distributed (Pvalue>0.05). Then continued with the t-test showing that there is a significant change every month (P value=0.000). Infusion of red ginger for 4 months was proven to be effective in increasing lung function from the parameter values of FEV1/FVC significantly.

Full article

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Journal ID : **TMJ-10-12-2021-10872** Total View : **398**

Title : Chronic suppurative otitis media with or without aural polyp

Abstract :
Aural polyp which is a reddish mass in external auditory canal in many cases of CSOM. The aim of this study is to evaluate frequency and site of origin of aural polyp in cases of CSOM and if there is relation of the presence of aural polyp and severity of disease (CSOM). Retrospective study of patient undergone ear exploration (canal wall up or canal wall down) in period from march 2017 to march 2020.author evaluate. A retrospective study of 256 patients with CSOM.144 male and 112 female with mean age 29.2±12.9 were included in this study. 103patients with aural polyp (72 patients with tubotympanic and 31 patients with atticoantral type) and 153 patients without polyp (97 patients with tubotympanic type and 56 patients with atticoantral type. Aural polyp is not associated with increased incidence of complications or bone erosion in CSOM disease.

Full article

Journal ID : **TMJ-10-12-2021-10869** Total View : **438**

Title : The Effect of Moringa Leaf (Moringa Oleifera) Extract Against Renal Histopathology of Diabetes Mellitus Wistar Rats

Abstract :
Diabetes Mellitus is a condition in which blood glucose level increases in a person's body that can lead to chronic disorders. The effects of diabetes mellitus on Kidney problems such as diabetic nephropathy can occur. Moringa leaf (Moringa Oleifera) is rich in antioxidants such as flavonoid, vitamin C, vitamin E, and vitamin A, and contain selenium which will help lower blood sugar level. This research was conducted to determine the effect of giving Moringa leaf extract (Moringa Oleifera) against the kidneys of Wistar rats with diabetes mellitus. This study was an experimental research, the methods applied were pre and post randomized controlled group design. It included changes in the pathological histological structure of the kidney such as: tubular cell degeneration, tubular cell inflammation, and irreversible tubular cell changes such as lumen atrophy or dilation, necrosis, interstitial hemorrhage, tubular cell fibrosis. This study was divided into 4 groups: one as the control group, and three as the treatment group induced with alloxan and given ethanol extract of Moringa leaf at doses of 250, 500, and 750 mg/KgBW. The results indicated that the ethanol extract of Moringa leaf at various doses demonstrated significant improvement (P value ≤ 0.05).

Full article

Journal ID : **TMJ-10-12-2021-10867** Total View : **378**

Title : Six Months Clinical Outcome After Tumor Removal and Posterior Stabilization on T9-L1 in a Schwannoma Patient: A Case Report

Abstract :
Schwannoma makes up of 85% of nerve sheath tumors. It is a slow-growing benign tumor and initially causes nonspecific symptoms such as segmental pain and paresthesia. The surgical goal is to perform complete tumor removal, which had been reported to produce good clinical outcome. The aim of this case report is to show the six months clinical outcome after tumor removal and posterior stabilization of a T9-L1 in schwannoma patient based on the 36 items short form survey (SF-36), Oswestry Disability Index (ODI), and Modified Barthel Index (MBI). A 50 yead old female patient who complained of back pain and radiating leg pain during the last 6 months, weakness on the left limb, and limitations of daily activities was presented. Physical examinations, magnetic resonance imaging (MRI) evaluations, and histopathological features showed a confirmed schwannoma. Six months after tumor removal and posterior stabilization on T9-L1, the patient showed improvements on SF-36, ODI, and MBI scores. The patient's initial presentation,

physical examinations, MRI and histopathology investigations, as well as pre- and post-operative score assessments results were typical of schwannoma and supported by various literature. Satisfactory clinical outcomes based on SF-36, ODI, and MBI scores were achieved after tumor removal and posterior stabilization in schwannoma patient.

Full article

Journal ID : **TMJ-09-12-2021-10865** Total View : **378**

Title : NEED TO DEVELOP PREVENTIVE MEASURES FOR BREAST CANCER CONSIDERING RISK FACTORS IN LATE REPRODUCTIVE AGE WOMEN

Abstract :

Breast cancer (BC) is one of the pressing medical and social problems of modern oncology due to the prevalence and psychological aspects associated with the problems of social adaptation. More than 1.3 million disease cases are registered annually in the world. In Russia, breast cancer has been the leading pathology in the structure of malignant neoplasms in the female population of late reproductive age since 1985. Malignant tumours of the mammary gland occupy a leading position in determining the level of temporary and permanent disability, reduce the average life expectancy of the female population, and cause irreparable economic damage to society. Late diagnosis of breast cancer, a large proportion of standard disease stages (41.9%), and high one-year mortality (10.9%) determine the importance of measures for early diagnosis. Therefore, an urgent issue is preventive measures substantiation for breast cancer based on the study of women's risk factors in late reproductive age.

Full article

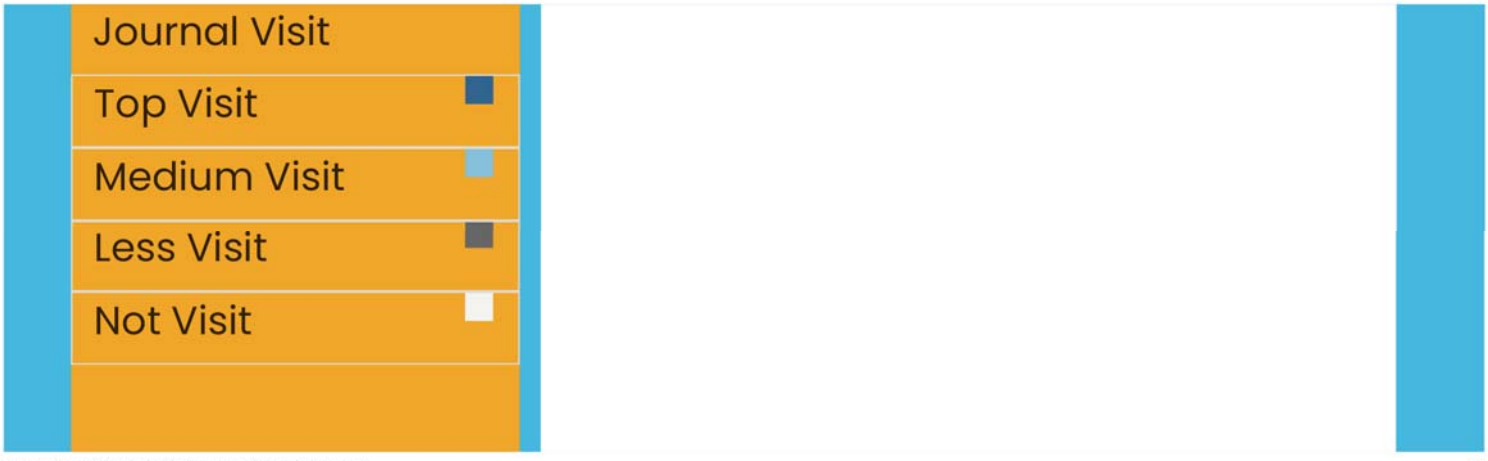
Journal ID : **TMJ-09-12-2021-10864** Total View : **423**

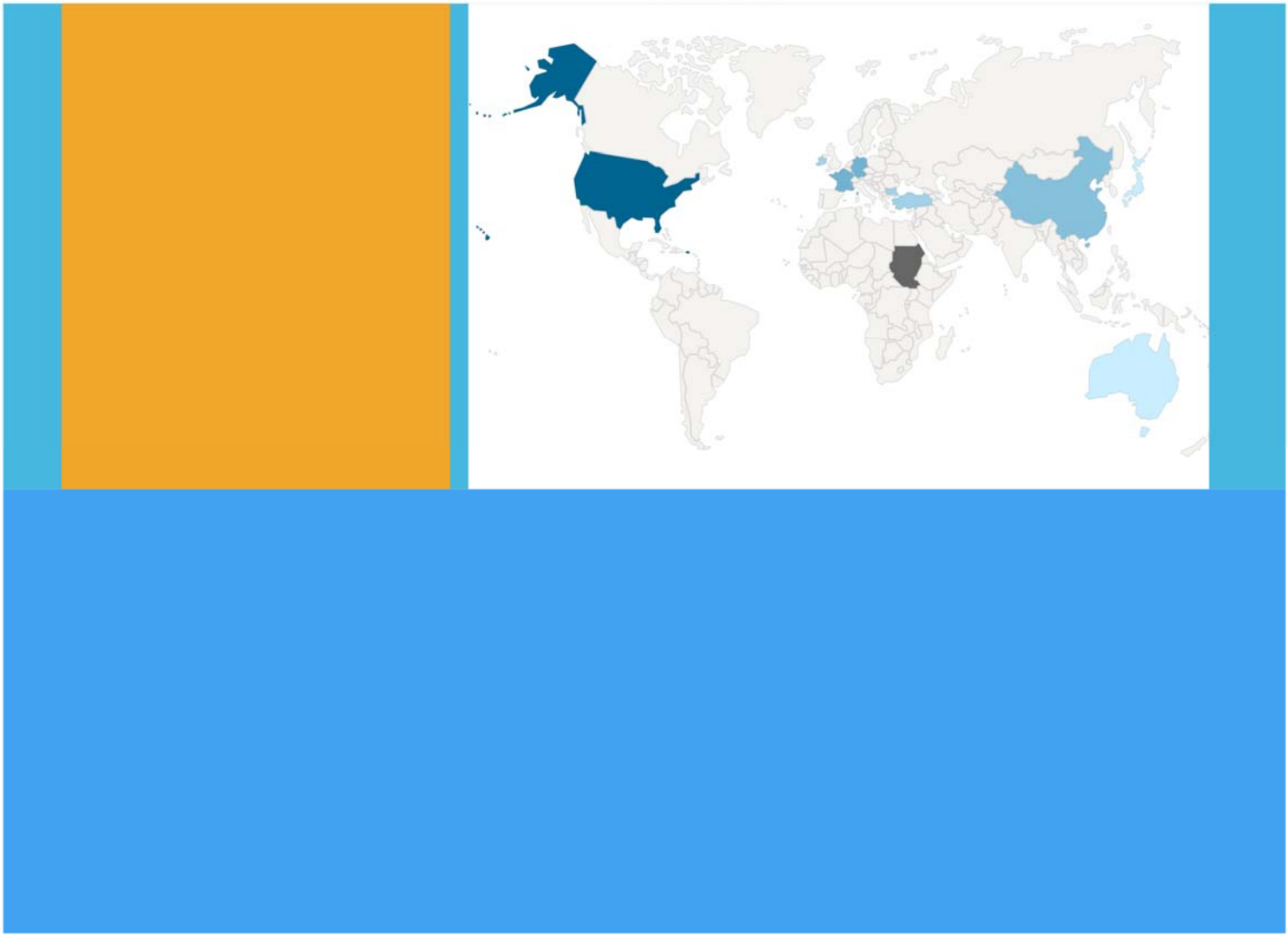
Title : Prevalence and Determinants of Preoperative Anxiety Among Iraqi Adults Using the Amsterdam Preoperative Anxiety and Information Scale (APAIS)

Abstract :

Although surgical procedures have improved, preoperative anxiety remains a concern in preoperative treatment and visit which is recognized as a common reaction among patients awaiting surgery. To assess the prevalence and determinants of preoperative anxiety among adult surgical patients using APAIS questionnaire. A cross sectional study that included 400 adult healthy respondents who were attended the selected clinics for any complain and selected randomly to participate in this study. Two different types of questionnaires had been applied to all attendants to collect needed information. The first questionnaire included questions to gather information on certain socio – demographic variables and the second questionnaire applied was the validated Amsterdam Preoperative Anxiety and Information Scale (APAIS). Preoperative anxiety was detected in 31.5%; while 61% had intermediate level of information. Four factors were found to be significant independent risk factors for greater likelihood of preoperative anxiety. These factors were young age (OR= 6.54), female gender (OR= 10.43), higher education (OR= 14.53), and negative history of previous surgery (OR= 2.76). Prevalence of preoperative anxiety was not high in this study. Factors that increase this prevalence were younger age, female gender, higher educational level, and lack of previous surgical experience.

Full article





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Journal ID : **TMJ-09-12-2021-10863** Total View : **379**

Title : Evaluation of the Routine Childhood Immunization Program Outcome at Primary Health Care Centers in Salah Al-Dean Governorate

Abstract :

A descriptive design, which is using the evaluation approach, is conducted through the period of January 10th to November 1st, 2021, to evaluate the Routine Childhood Immunization Program Outcome at Primary Health Care Centers in Salah Al-Dean Governorate. The study is using a multistage "non -probability" convenient sample of (thirty-two) primary health care centers (sixteen main and sixteen sub main) distributed in Salah Al-Dean health directorate. An instrument is developed of the Pan American Health Organization and World Health Organization for the purpose of the present study. The study instrument is consisted of the evaluation of Routine Childhood Immunization Program Outcome at Primary Health Care Centers. Content validity and internal consistency reliability are ascertained for the study instrument through a pilot study. The data are gathered through the utilization of the study instrument and the structured interview technique as data gathering method. The data are analyzed through the using of descriptive statistical data analysis approach which includes (frequencies, percentage, mean, total scores, and ranges). The study results present that all of the main primary health care centers and majority of the sub primary health care centers have good level of overall evaluation of the Routine Childhood Immunization Program outcome (100%) (87.5%) respectively. The study concludes that the Routine Childhood Immunization Program outcome is adequately employed at all of the Main Primary Health Care Centers and majority of the sub primary health care centers have presented continuous, cost-effective and adequate immunization services. Likewise, the present study recommends that the Routine Childhood Immunization Program at the Main and Sub primary health care centers should be occupied with all the necessities of the outcome for the benefits of consumers.

Full article

Journal ID : **TMJ-09-12-2021-10862** Total View : **401**

Title : Evaluations Of Antibacterial Efficiency of Nife2o4 Nanoparticles Alone and in Combination With Some Antibiotics Against Multidrug Resistant Proteus Mirabilis

Abstract :

Proteus mirabilis bacteria have a unique ability to contaminated wounds and lead to severe host tissue damage. The aimed of our research to evaluate the antibacterial efficacy of nickel ferrite nanoparticles alone and in mixed with antibiotic against multidrug-resistant Proteus mirabilis utilizing Kirby-Bauer and molecular methods. included collection of 50 burned wound sample from patients in Tikrit Teaching Hospital and external clinics. (from October 2018 to March 2019). results revealed that 40(80%) from samples were react positively for Proteus mirabilis. Bacterial isolates (Proteus mirabilis) Doxycycline hydrochloride, Penicillin, CO-Trimoxazole, Ciprofloxacin, Cephalosporin, and Penicillin resistance were found. results also revealed the (NiFe2O4) inhibits strongly growth of bacteria isolated at various mini-mum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) The MBC concentricity equal 256 while the MIC concentration was 128(mg.l-1) (mg.l-1) signifi-cant alterations recorded within DNA were observed before and after processing with nano-particles, according to the findings.

Full article

Journal ID : **TMJ-09-12-2021-10861** Total View : **378**

Title : Urological problems among Men and Women with Diabetes Mellitus at Al Hussen Hospital in Holly Karbala City

Abstract :

A descriptive assessment study design is carried throughout the Assessment of Urological problems among men and women with Diabetes Mellitus at Al Hussain Hospital in Holly Karbala City for the period of 4th November 2020 to 5th May 2021. A non-probability a purposive sample of (100) patients are randomly selected from Medecin Ward at Al Hussain Hospital were distributed 53% of sample female and 47% male. As regard to all ages. A questionnaire was constructed for the purpose of the study. It is comprised of two parts which deal with men and women which were suffered of diabetic mellitus toward their urological problem as well as demographic characteristics. Reliability of the questionnaire was very high level of stability and internal consistency of the main study domains at the level of items of the applied questionnaire by using the major statistical parameter Alpha Cronbach. In order to test the validity of the questionnaire, it is forwarded to the panel of experts. Data were collected through the period from 1 of November, 2020 Up to the 20 of March, 2021, during the utilization of the self-administration technique (interview) as a mean of data collection from ward at AL Hussain Hospital in Karbala City. Data were analyzed through descriptive statistical data analysis approach. It is used for determining the (Frequencies, Percentages, and Cumulative Percent) and inferential statistical data analysis approaches which included (Contingency Coefficients, Chi-Square test, Binomial test multiple correlation coefficients and Simple Linear regression models). The study results concludes of less than half of patient had color and smell of urine changed & suffer from swelling of the limbs. Few of them suffer from lower abdomen pain, feel constantly urinating, suffer from a burning sensation while urinating, suffer from unprecedented high and low in diabetes, have a high blood pressure, smoking, have the inheritance of the same disease, have other diseases. The study recommends that the take medication of DM in regular time. Regular check-up of glucose level, and regular doing of general urine examination and urine culture to detect type of pathogen that cause the problems, also take medication to manage the urological problems as physician order and using of appropriate dietary guideline for DM patients and also appropriate for patient with urinary system health problems.

Full article

Journal ID : **TMJ-08-12-2021-10859** Total View : **399**

Title : A Study of the Relationship Between Perception of Hypertensive' Patients and their Medication Adherence

Abstract :

In the treatment of hypertension, medication adherence is a critical component of illness management. The study aims to look at the link between medicine compliance and health perception in hypertension patients. The participants in this descriptive cross-sectional study were diagnosed with hypertension in Mosul, Iraq. Data was collected using sociodemographic factors, an antihypertensive drug compliance measure, and a health perception scale. The 120 patients in the study had an average age of 62.859.29 years, with 55.6 percent of them being women. The participants' mean Adherence to drug treatment scale score was 3.981.73, with 93.2 percent of them adhering to drug treatment. The participants' mean health perception score was 49.766.50, and there was a weak negative association between health perception and medication compliance. The summaries of physical components from the subscales of quality of life had a mean score of 43.595.69, while the summary of mental components had a mean score of 47.106.62. The score of Adherence to pharmacological therapy and the quality-of-life subscales had no association. Furthermore, it was observed that those with good Adherence to pharmacological therapy had blood pressure under control at a statistically significant rate. According to the findings of this study, patient adherence to pharmacological therapy is unrelated to health perception. Furthermore, patients with good drug compliance had lower blood pressure, and home blood pressure readings improved drug compliance.

Full article

Journal ID : **TMJ-08-12-2021-10858** Total View : **309**

Title : Usefulness of Modified Medical Research Council (MMRC) Dyspnea Scale for Assessment of Dyspnea Severity in Clinical Practice in COPD patients

Abstract :

Dyspnea is a predominant symptom of chronic obstructive pulmonary disease (COPD), and it considered as a major index of the disease severity and a prominent target of the treatment but its assessment is complex in clinical practice. The modified Medical Research Council scale (mMRC scale) is largely used in the assessment of dyspnea in chronic respiratory diseases. Aims of study to evaluate usefulness of mMRC (modified medical research council) for assessment of dyspnea severity in clinical practice in patients with COPD. Cross sectional study was carried out in AL-Emamain Al-Kadhimain medical city from 1st July 2018 to end of January 2019 hundred patients with COPD were included in this study. The sociodemographic and clinical history that related to admission to

emergency and hospital wards at the last year and smoking status were recorded. Dyspnea was evaluated by the mMRC scale and

emergency and hospital wards at the last year and smoking status were recorded. Dyspnea was evaluated by the mMRC scale and classified according to spirometric measurements. 100 patients with COPD were included, mean age of the patients was 63±9.0, 80% was males and 20% was females, the mean of BMI was 27.1±5.05, 54% was current smoker and 46% was ex-smoker. The mean value of FEV1 for our patients was 55.4(GOLD2) and the mean value of SPO2, FEV1 and other parameters of spirometric findings were decreased significantly with progression of mMRC grade. Frequency of patients with late grades of mMRC had higher frequency of admission to emergency ward than hospital wards. The highest percentage of patients (32%) was in grade 2 according to mMRC and GOLD 2(50%) and there was significant association between mMRC grade and gold grade. Study shows that mMRC is useful scale for assessment the dyspnea intensity in patients with COPD.

Full article

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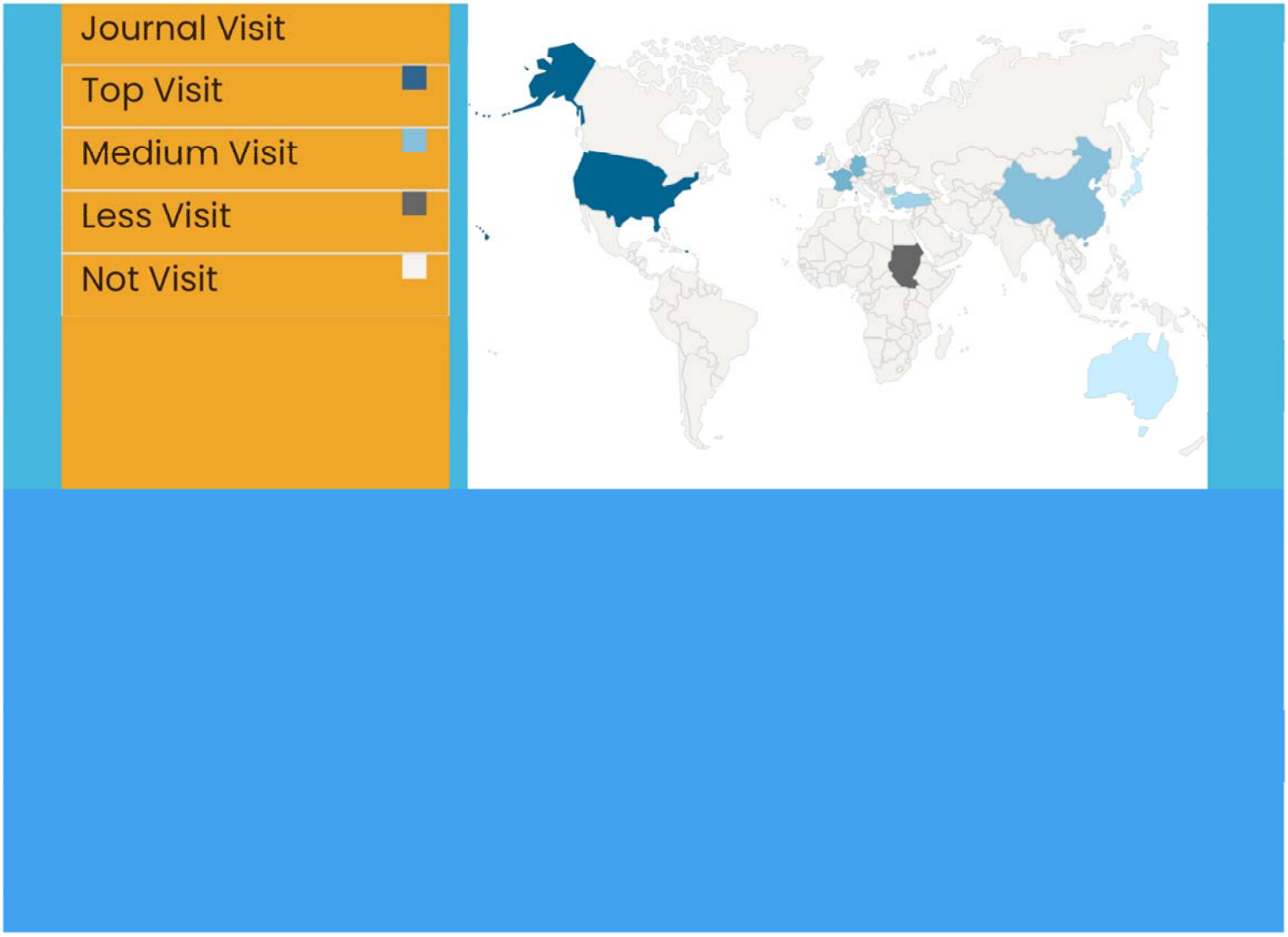

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Journal ID : **TMJ-08-12-2021-10857** Total View : **397**

Title : Has a pleuroscopy role in the diagnosis of unknown cause pleural effusion? a single-center study

Abstract :
In about 25-40% of pleural effusion cases not reached to diagnosis, so taking a pleural biopsy may decrease the number of cases with difficulty in diagnosis of pleural effusion. Using pleuroscopy has high accuracy in the diagnosis of these cases. It is safe with complications. In this study, 60 patients who underwent a pleural biopsy by pleuroscopy were studied with unknown causes of pleural effusion. The mean age was (51-/+13.2) and male to female ratio was 4 to 1. There were 36.6% of cases diagnosed with tuberculosis, 23.3% of cases diagnosed with adenocarcinoma. Pleuroscopy failed to reach a diagnosis in 16.6% only. So, the pleuroscopy yields high accuracy in the diagnosis of pleural effusion with unknown causes.

Full article

Journal ID : **TMJ-08-12-2021-10855** Total View : **402**

Title : Clinicopathological Characteristics of Subcutaneous Panniculitis-like T-cell Lymphoma: An article review

Abstract :
Subcutaneous Panniculitis-like T-cell lymphoma (SPTCL) is a rare malignancy and difficult to diagnose. The clinical and histopathological characteristics of SPTCL overlap with infectious, autoimmune, and aggressive malignancies so that they often miss provisional diagnosis and misdiagnosis. A structured scientific study of the clinicopathological characteristics is needed to increase the clinician's knowledge as consideration for diagnosis. This review aimed to describe the clinicopathological characteristic of patients with SPTCL. This study used a literature review approach which was searched using Pubmed, EBSCO, and Science Direct with the keyword 'Subcutaneous Panniculitis-like T-cell Lymphoma. The articles were selected based on the inclusion and exclusion criteria set by the researcher. 50 cases obtained from this study indicate that cases of SPTCL occur at a median age of 28.5 years and are dominated by women. Clinicopathological characteristics studies are very helpful in the diagnosis of SPTCL. The clinical characteristics of SPTCL lesions vary, namely in the form of plaque, erythema edema, and mostly nodules on the trunk, extremities, or head. The most common lesion is a predilection nodule on the trunk. Systemic symptoms most commonly include fever and extracutaneous involvement in the form of lymphadenopathy, hepatosplenomegaly, bone marrow involvement, and hemophagocytic syndrome. The histopathological characteristics of adipocyte rimming, karyorrhexis, and fat necrosis with small-medium sized atypical T-cell infiltration and also a lobular pattern. The immunohistochemistry characteristics of SPTCL are CD3+, CD8+, CD56-, TIA-1+, Beta-F1+, Granzyme B+, and Ki-67 >30%. as well as the CD3+, CD8+, CD56-, Beta F1+, Granzyme B+ and Ki-67 levels >30%.

Full article

Journal ID : **TMJ-07-12-2021-10854** Total View : **409**

Title : Preventive measures of COVID-9 (coronavirus disease 2019) among health care workers (HCWs)

Abstract :
Health care workers (HCWs) work in very high risk areas, a lot of them getting the virus and some of them died. They are difficult to be replaced, leading to collapse of health system and more spreading of the virus. By using the keywords, searching in different data bases in 2019, 2020, for literatures in different domains, language, geographical and scientific manual and looking for references with

in the articles. These are read and analyzed. The most important preventive measures of COVID19 infection of HCWs are education and

training of them, excluding those with risk factor of getting the virus, proper use of Personal protective equipment (PPE), primary case control, environmental factors control, and resources control. HCWs are at very high risk for COVID19. It is prevented by, education and training of them, excluding those with risk factor of getting the virus, proper use of PPE, and control of primary case, environmental factors, and resources.

Full article

Journal ID : **TMJ-06-12-2021-10853** Total View : **389**

Title : Presentation and management of limb dysfunction after native hemodialysis arteriovenous fistula

Abstract :

Limb dysfunction following fistula creation can range from simple temporary finger numbness to even frank gangrene necessitating amputation. The etiologies of limb dysfunction related to native arteriovenous fistula (AVF) include venous hypertension, steal syndrome, symptomatic aneurysm, carpal tunnel syndrome, painful shoulder, ischemic monomelic neuropathy (IMN), and temporary neuropathy. A retrospective analysis of data was collected over four years (from January 2017 till May 2021) of 1709 patients who presented with vascular access-related complaints 176 of them had limb dysfunction after native hemodialysis arteriovenous fistula. All patients were assessed by history and physical exam, while investigations were done according to provisional diagnosis. The patient's information, management, and results were documented. The shortened disabilities of the arm, shoulder, and hand questionnaire (QuickDASH) was used in all included patients to assess the degree of disability. The most common cause of limb dysfunction was venous hypertension (27.04 %), followed by steal syndrome 26.7 %, symptomatic aneurysm 25.56 %, and carpal tunnel syndrome 7.95 %. The mean age of patients with the painful shoulder was higher than other etiologies, while the patients with venous hypertension were the youngest, with more females in the group. Patients with IMN and steal syndrome had the highest QuickDASH score and suffered the most intense pain of all participants. The surgical intervention was done in 133 patients. AVF preserving interventions relieved symptoms in 68.57 % of cases less than AVF sacrificing interventions which were effective in 83.07 % of cases, and the difference was statistically significant (p-value = 0.00072). We had one case of hand loss, two cases of fingertip loss, and one patient died after revascularization for steal syndrome. *Limb dysfunction after native hemodialysis arteriovenous fistula is a common* problem. AVF preserving intervention had a success rate and should be used in most cases before closing the AVF.

Full article

Journal ID : **TMJ-06-12-2021-10852** Total View : **435**

Title : Childhood Emotional Abuse and Neglect with Emotional Dysregulations among University Students: Role of Social Support

Abstract :

Childhood Emotional Abuse (CEA) and Neglect (CEN) is one of the most common type of abuse worldwide. However, there is a lack of research on the prevalence of CEA and CEN and its effects on Emotional Dysregulation among University Students in Malaysia. The aim of this study was to identify (1) the prevalence, (2) the effects on Emotional Regulation and (3) the role of social support in improving Emotional Dysregulation. A cross-sectional study with a total of 310 university students were conducted and data were collected via online and processed by using SPSS-21. The study found a significant relationship of Emotional dysregulation with of CEA and CEN. There was also a significant role of social support in preventing emotional dysregulation problem among abuse survivors. In Conclusion, good social support system is highly associated in preventing Emotional Dysregulation among CEA and CEN survivors. Thus, this study suggests early intervention with inclusion of good social support in order to help improve Emotional dysregulation.

Full article

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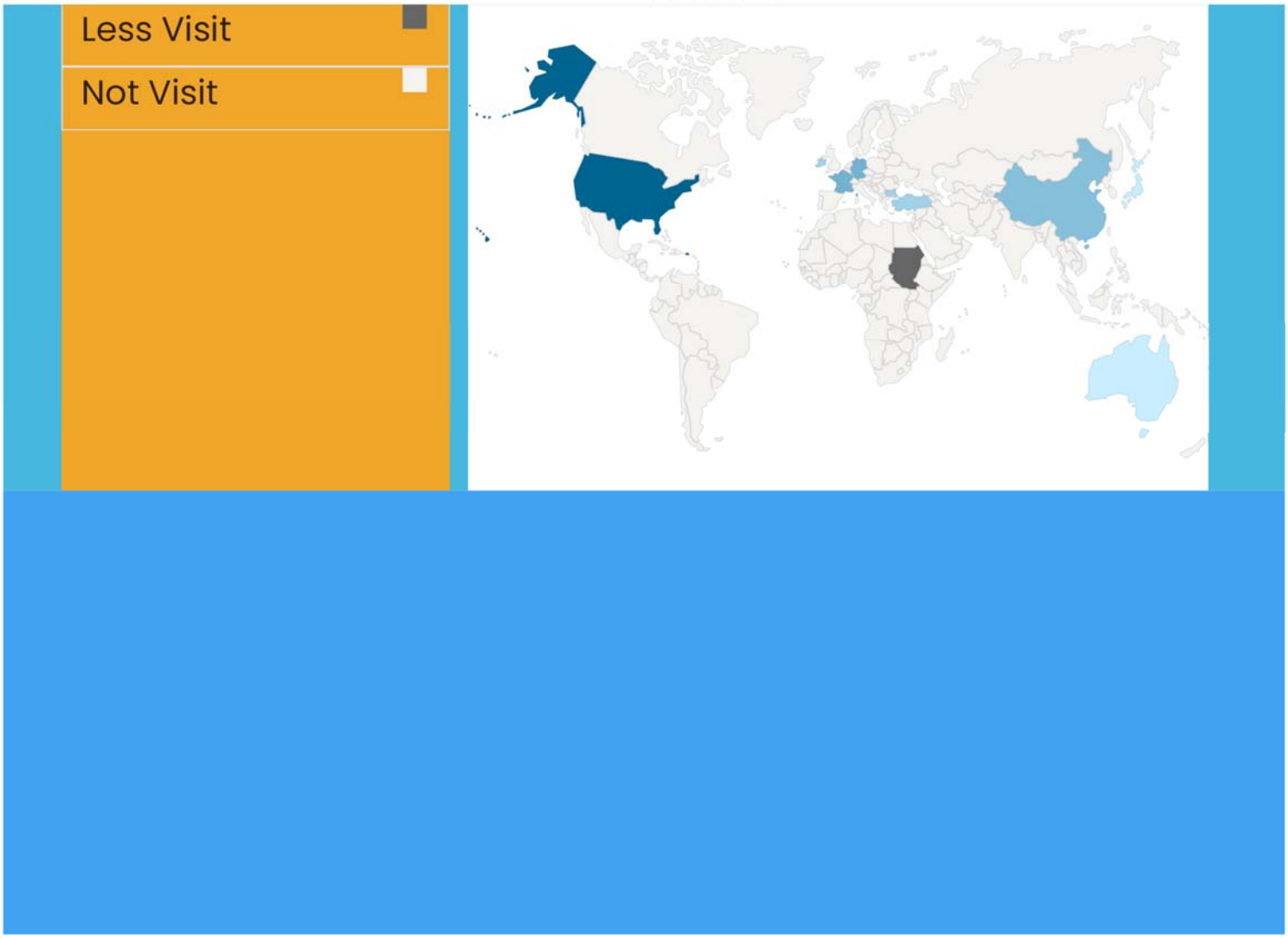
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Journal ID : **TMJ-05-12-2021-10850** Total View : **309**

Title : Evaluation The Effect of Oral Cryotherapy Management for Oncologic Patient's in Nuclear Medicine Hospital at Mosul City

Abstract :

The current study objective is to evaluates oral cryotherapy's effectiveness for oncology patients at the nuclear medicine hospital in Mosul city. This study was quantitative research that used a case-control design to collect data randomly at the Oncology and Nuclear Medicine Hospital in Mosul City to assess the effect of administrating oral cryotherapy management from 1st September 2020 until 1st April 2021. As for samples, it was non-probability. The study was the number of samples was (60) samples, was divided into (30) for the control group and (30) for the case group. The total demographic variables of the respondents (case and control group) were 63.3% (19) of the case group and 46.6% (14) of the control group at the age of (41-60) years. The intergroup correlation chi-square was (4.813), P=0.090.66. Seven percentage (20) of the case group at female gender, while 53.3% (16) of the control group had the male gender with the chi-square for correlation between groups was = 2.443, P=0.118. There were statistically significant relationships between the case group outcomes. However, there were non-significant relationships between the control group results at the pre-application stage, after 7, 14, 21 days in P ≤ 0.005. There were non-significant correlations between the study results, with most of the demographic variables at P. ≤ 0.005. We found oral cryotherapy to be a comfortable, inexpensive, and effective way to avoid mucositis. The study recommended more accurate research about cryotherapy, especially in my country, due to the small number of studies conducted in Iraq.

Full article

Journal ID : **TMJ-05-12-2021-10849** Total View : **401**

Title : Features of securing and guaranteeing the right to health care in the constitutions of the states of the world

Abstract :

The article examines the features of securing and guaranteeing the right to health protection in the constitutions of the states of the world. The basis for the proclamation of the right to health by states at the constitutional level was the provisions of the basic international documents on human rights the Universal Declaration of Human Rights of 1948, the International Covenant on Economic, Social and Cultural Rights of 1966, the Convention for the Protection of Human Rights and Fundamental Freedoms (abbreviated – the European Convention on Human Rights) 1950 Those countries that ratified these documents, pledged to bring their legislation to the international standards enshrined in them. Therefore, the right to life, the right to health care are proclaimed in the constitutions of states as inalienable and inviolable. In many countries, the constitutional norm reflects not only the fact of the proclamation of the right, but contains provisions on its content, the means of guaranteeing the state the implementation of this right. These guarantees are state financing of health care sectors, different models of health insurance, reforming the medical system in matters of health care management, changes in the organizational and legal forms of health care institutions, the introduction of advanced principles, for example, "money follows the patient", etc. The conclusion is made about the obligatory proclamation of the right to health care in the constitutions of all states of the world, the disclosure by the constitutional norms of the content and means of guaranteeing this right by the state.

Full article

Journal ID : **TMJ-05-12-2021-10848** Total View : **389**

Title : Environmental factors associated with drowning prevention knowledge of parents in Bangladesh: a randomized controlled trial

Abstract :

Drowning is the third leading cause of death for children aged 0–4 years in many Asian countries, and is a serious but neglected health problem in low and middle-income countries (LMICs) like Bangladesh. In Bangladesh, drowning rates are 10 to 20 times more than those in other developed countries. The aim of the effectiveness of a mobile SMS intervention to improve the environmental knowledge of parents of children aged under five concerning the prevention of drowning. A cluster randomized community trial with 788 parents of children aged under five in a rural community of Bangladesh. Mobile SMS intervention for parents of children under five years concerning the prevention of drowning. Association in environmental knowledge of parents concerning the prevention of drowning between the baseline and immediate follow-up after the intervention, and after three months. There was a significant improvement in environmental knowledge in the intervention group compared to the control group at different at baseline, immediately after intervention and 3-months after intervention. The associated factors for drowning included the time (11:00am-2:00pm), lack of swimming ability, parents who were not aware about childhood drowning, unwanted ditches that were not filled in, lack of medical facilities, and lack of information through mass media for the prevention of childhood drowning. Special programmes and training could be increase knowledge about childhood drowning prevention in Bangladesh and should be broadcast on the radio and television networks.

Full article

Journal ID : **TMJ-05-12-2021-10847** Total View : **436**

Title : Prevalence and determinants of caesarean section in private and public health facilities in Bangladesh: Bangladesh Demographic and Health Survey, 2014

Abstract :

The aims of this study to determine the prevalence and determinants of caesarean section in private and public health facilities in different region in Bangladesh. A cross-sectional study was conducted for this research. Data from the Bangladesh Demographic and Health Survey (2014, BDHS) has been analyzed. The study design selected 17,842 residential households for the survey. Percentage distribution has been computed to obtain the rates of caesarean section in public and private sectors. Then logistic regression has been applied to calculate odds ratios (ORs), 95% confidence intervals (CIs), and p-values. In Bangladesh, 20.10% of the total caesarean section deliveries were performed in public medical centers and 79.90% caesarean section took place in private hospital. Wealth index found positive association with caesarean section in private clinic. Husband's education levels were secondary or higher, they preferred to go health institutions for childbirth. The number of caesarean sections was higher for mothers who watched television. In both kinds of centers, mothers who received prenatal care by qualified doctor had more caesarean section deliveries. Caesarean section occurred mostly for lower order birth among mothers in public medical and private hospitals. It is essential to improve facilities for mothers and babies at root level. Effective care of public and private health institutions for mother must be ensured. Normal vaginal delivery (NVD) may be driven by the support of modern equipment. Proper training, good practice and quality service is needed for NVD.

Full article

Journal ID : **TMJ-04-12-2021-10846** Total View : **379**

Title : Effect of vitamin D level on quality of life in epileptic patients

Abstract :

People with epilepsy suffer from poor quality of life as a result of frequent seizure cognitive dysfunction, and a high risk of psychiatric co-morbidities. Beyond the role of vitamin D in bone health, it may be implicated in the functions of other systems of the body such as cardiovascular systems, cancer, autoimmune diseases, type 2 diabetes, and depression. The present study was conducted to study the effect of vitamin D administration on the quality of life in epileptic patients treated with antiepileptic drugs carbamazepine and levetiracetam. The study was performed with the participation of 67 patients newly diagnosed with epilepsy. They were taking the enzyme-inducing agent carbamazepine, and the non-enzyme-inducing agent levetiracetam. quality of life (QOLIE-31) of all patients was calculated by using the QOLIE-31 questionnaire (version 1.0). Patients then were divided into 2 groups according to the basis of the vitamin D level of the patients into group A, 33 patients, and group B, 34 patients. Group A received vitamin D supplements based on their vitamin D levels, while group B did not. The addition of vitamin D to group A showed an increase in the % of improvement rate as compared to group B which did not receive vitamin D supplementation. This improvement includes the patient awareness about his

compared to group B which did not receive vitamin D supplementation. This improvement includes the patient awareness about his disease and how to deal with it, how used the drug, and its side effects. This work could provide evidence for the efficacy of vitamin D supplementation to patients with epilepsy through correction of the quality of life of the patients.

Full article

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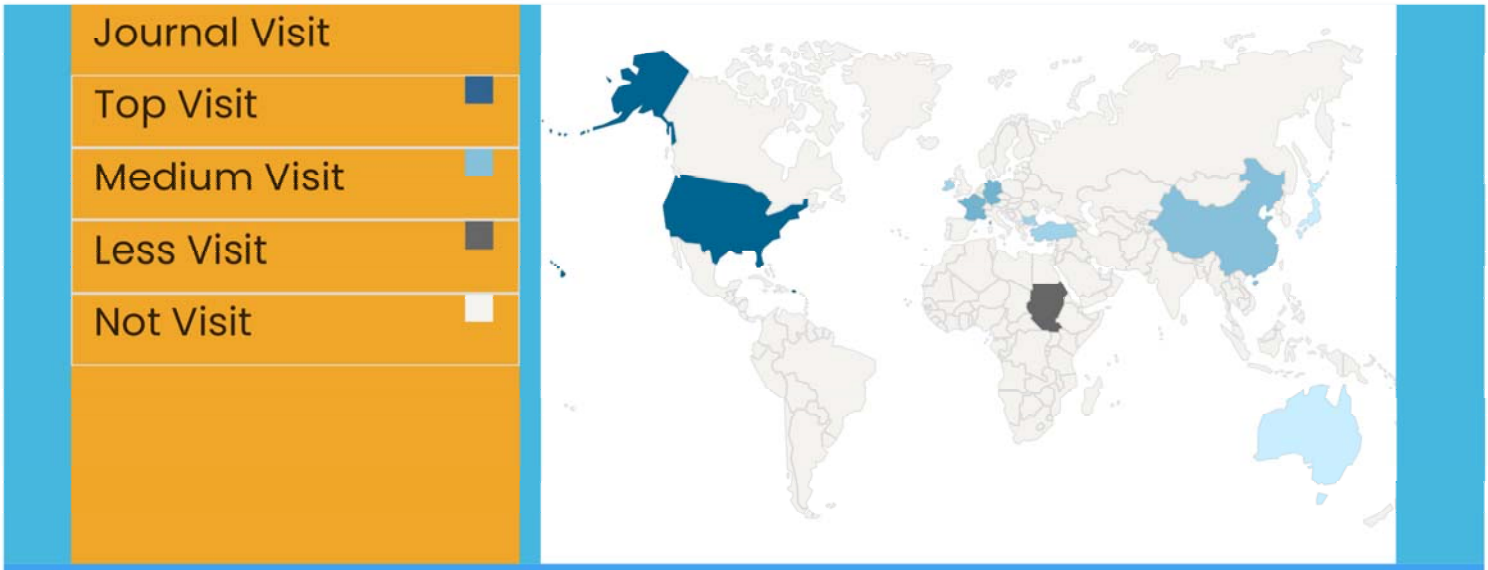

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Journal ID : **TMJ-04-12-2021-10845** Total View : **380**

Title : Desloratadine -Induced Histological and Biochemical changes in the kidneys of Rats

Abstract :

The kidneys are major organs that clear the drugs. Urine is one of the primary elimination routes for drugs and metabolites to be excreted outside of the body. Most drugs are predominantly excreted via the kidneys as their metabolized products. The present study was done to investigate the histopathological impact of desloratadine doses on renal tissues, histological features, and their impact on serum lipocalin-2, Kidney function test (blood urea, and creatinine). In this study 36 Male Wistar rats have been used and divided into 3 groups (twelve for each one); group 1 (control), group 2 & group 3 treated Male Wistar rats, were orally treated with desloratadine at a dose of 0.142 mg/kg and 0.245 mg/kg in saline every day for three weeks. Al the rats were euthanized under deep anesthesia and tissue samples were obtained by perfusion fixation. After routine histological procedures, the paraffin sections were stained with hematoxylin and eosin and examined histologically. The treatment of desloratadine led to a significant decrease in the reduced serum levels of lipocaline-2, urea and creatinine. In association, desloratadine -induced deleterious histological alterations including congested blood vessels and construction with detachments of tubules from underling basement membrane. Our results point out the risk of increased renal damage due to a long-term use of desloratadine.

Full article

Journal ID : **TMJ-04-12-2021-10844** Total View : **401**

Title : Psychometric Scale for Assess the Barriers of Adult Nursing Students to follow up on Mental Health Counselling in Iraq

Abstract :

The experience of applying the psychometric scale to a conscious age group of the Iraqi people to meet the psychological and mental needs and to consider mental counselling an important part in the life of the individual and to avoid the obstacles that prevent going to the psychologist. The study aims to identify the barriers and attitudes of adult nursing students in following up on the mental health counselling. A descriptive study was conducted on July 16 and September 29, 2021 at the College of Nursing to identify the barriers and attitudes of the College of Nursing students in applying psychometrics to follow up on mental health counselling and their demographic characteristics. One hundred students were chosen randomly. Descriptive statistics have been used extensively in the 16th edition of the SPSS. The study found that the final evaluation of the barriers items (27) to assess the barriers and their attitudes (10) that prevent the follow-up of mental health counselling indicated that the students did not follow-up significantly. According to the results of the current study, the majority of students do not follow or agree to mental health counselling in Iraq and consider it unimportant. We recommend doing consultations in the direction of mental health, and we also recommend doing health education, starting with schoolchildren and then university students, indicating the importance of follow-up to mental health.

Full article

Journal ID : **TMJ-04-12-2021-10843** Total View : **369**

Title : Compare using of LigaSure and Conventional Bipolar device in total thyroidectomy, retrospective study

Abstract :

LigaSure is an advance device that profoundly used for total thyroidectomy. It has been recognised as an expensive disposable hand

with limited time of used. However, conventional bipolar device that extensively used for the same purpose characterised by having a cheap reusable hand regarding safety, operative time, postoperative complication. Data of current study collected retrospect fully for period form 1st of January 2016 to 30th of January 2020. A 144 patients underwent total thyroidectomy, 27 male, 115 female, 70 patients surgery done by LigaSure other 74 patients by conventional bipolar, then study the outcome and complication of total thyroidectomy in both group. A 144 patients were included for total thyroidectomy with two different haemostasis techniques (70 patient by LigaSure, 74 by conventional bipolar device). Regarding time of operation, using LigaSure significantly required less time that the conventional bipolar (p value < 0.05). Meantime 55 min vs 85 minutes respectively. There was no significant differences between both techniques in term of postoperative complication bleeding, subcutaneous haematoma, hypocalcaemia, and change in patients voice. The bipolar device gives efficient surgical out come and low cost in compare to LigaSure during total thyroidectomy.

Full article

Journal ID : **TMJ-04-12-2021-10842** Total View : **398**

Title : Coping Strategies of Nurses working in General and Psychiatric Wards at Teaching Hospitals in Baghdad City: Comparative Study.

Abstract :

Job stress is one of the main psychological and social problems that individuals and institutions suffer from both, negatively affecting the health of the individual and his professional achievement, as well as the good running of the institution. To compare between the levels of coping strategies of nurses working in general and psychiatric wards at teaching hospitals in Baghdad City. Descriptive and comparative design was used. Using a non-random convenience sample of 140 nurses, including 70 nurses from Baghdad Teaching Hospitals' mental units (AL Rashad Teaching Hospital, Ibn Rushed Teaching Hospital) and 70 nurses from Baghdad Teaching Hospitals' general wards. The scale of techniques for dealing with job stress (Brief COPE scale) is used by the researchers to measure the levels of coping. There was no statistically significant difference between the psychiatric and general nurses in relation to coping strategies. Hospitals must have nurse training programmers on how to face their pressures in effective coping methods.

Full article

Journal ID : **TMJ-03-12-2021-10841** Total View : **371**

Title : Evaluation of the Educational Program of Special Education Teachers Regarding Emotional Intelligence in Mosul City

Abstract :

Emotional intelligence is defined as interacting effectively with people and their emotions in both the workplace and outside of work situations. Consequently, it would affect the way people interact at work and the general working atmosphere [1]. Researchers in this research aimed to create and evaluate a special education educational program on emotional intelligence (EI). This study used a quasi-experimental design using an application pre- and post-test technique to conduct the research. Sixty special education instructors from special education schools in the Nineveh Education Directorate were randomly selected to participate in the study. A 40-question multiple-choice exam was devised by the researcher to assess instructors' understanding of emotional intelligence. Teachers will be tested on a variety of topics related to emotional intelligence and social intelligence, including self-awareness, self-management, social awareness, and social management. Using data from the research and control groups, special education teachers' understanding of emotional intelligence-related knowledge categories is significantly different. The research indicates that after implementing the curriculum, there is a significant increase in special education teachers' understanding of emotional intelligence. This research suggests developing and implementing a similar training curriculum for special education instructors who work with children who have developmental disabilities.

Full article

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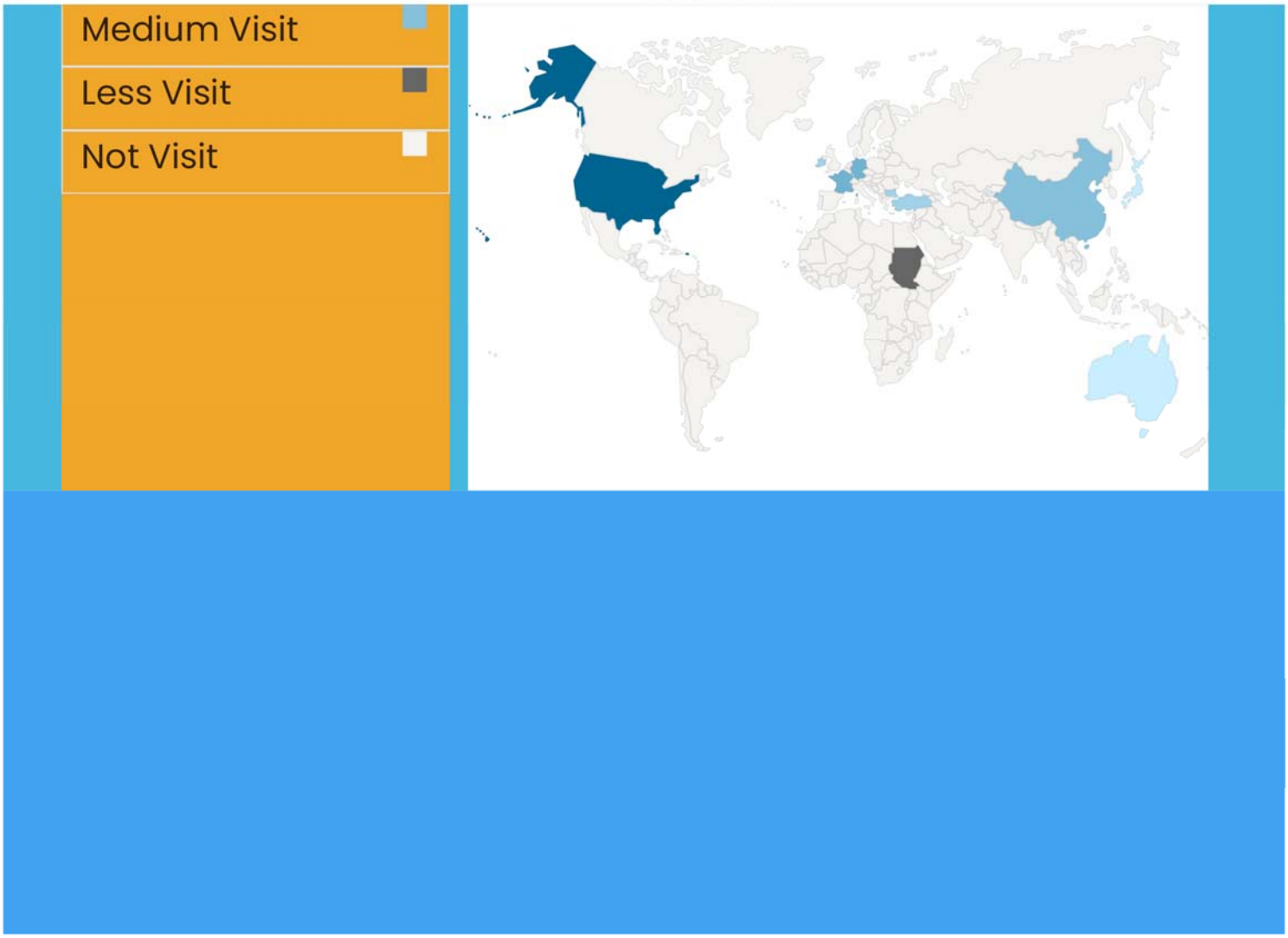
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Journal ID : **TMJ-02-12-2021-10840** Total View : **389**

Title : Odontogenic infection disguising as sinusitis

Abstract :
Diseases of the maxillary sinus and maxillary dentition frequently have overlapping symptoms and presentation. As a result, they may be misdiagnosed or failed to be diagnosed. We report a case of a 16-year-old girl with a two-day history of right facial swelling which was painful. She had rhinitis but denied any toothache. Her nasoendoscopic examination was normal but there was mild caries of her upper incisors with a right upper gum swelling. She was diagnosed with facial cellulitis secondary to apical periodontitis. Her symptoms resolved with drainage and systemic antibiotics. We wish to highlight the fact that dental infections may be present despite the absence of toothache and the importance of a detailed examination of the oral cavity and dentition in patients with suspected sinusitis to avoid a missed diagnosis.

Full article

Journal ID : **TMJ-01-12-2021-10839** Total View : **453**

Title : Prevalence of SARS-CoV-2 co-infection with β-haemolytic streptococci in a sample of Iraqi patients

Abstract :
Bacterial co-infections with respiratory viral pathogens are very common. This study was designed to investigate the incidence of β-haemolytic streptococci in patients with COVID-19 and study their antimicrobial susceptibility patterns. A total of 388 clinical samples were collected from Covid-19 patients who suffering from acute pharyngitis. β-hemolytic isolates were diagnosed using the Vitek 2 system. Streptex agglutination test was used to classify streptococci into different groups. These beta-hemolytic isolates were tested for their production of virulence factors and study their antimicrobial susceptibility patterns. Results of PCR showed that (260) patients had Covid-19 positive results, and (128) patients had negative results, who have been excluded. The isolation rate of β-hemolytic streptococci bacteria was (113; 43%). By using Streptex agglutination test, β-hemolytic isolates were divided into (59;52.2%) isolates belonged to group A, 7 (6.1) belong to group C, (3; 2.6%) belong to group F, and 44 (38.9) belong to group G. Five (4.4%) isolates were diagnosed as S. anginosus and 39 (34.5%) as S. dysgalactiae equisimilis. All five isolates were lipase and protease producers and had a capsule but they were negative for Nitrocefin disk method. Resistance to antibiotics showed that all isolates were resistant to most of the antibiotic classes tested. This study is considered one of the few studies in Iraq that accomplished for isolation and characterization of bacteria isolated from Covid-19 patients with infected acute pharyngitis. The study concluded that a high rate of Streptococcus dysgalactiae equisimilis (SDE) strains was isolated than Streptococcus anginosus group (SAG) in acute pharyngitis.

Full article

Journal ID : **TMJ-01-12-2021-10838** Total View : **378**

Title : Gene sequence and Gene expression of IL-1β in aborted women infected with Toxoplasmosis

Abstract :
Toxoplasma is a dangerous parasite that exists inside the cells of the human body, which leads to serious cases such as abortion in pregnant women. In this study, a total of (60) blood samples were collected from aborted women who attended Azadi Hospital/ Kitkuk City-Iraq, during the period from 1st February to 1st September 2021. The results showed that the mean age of patients was (41.84±15.88) years, while in the control group it was (41.84±15.88) with no significant difference P>0.05. The mean of anti- Toxoplasma

IgM was (2.00±1.17) in the patients group in comparison with the controls (0.09±0.17), while the mean of anti- Toxoplasma IgG was

(14.20±7.06) in the patient women compared to the control group (0.06±0.11) with a highly significant difference. According the residency of the study group, the mean of anti- Toxoplasma IgM in urbans was (1.95±1.25), compared to the rural citizens (2.05±1.10), and the anti- Toxoplasma IgG in urbans was (14.86±6.71) in comparison with the rurals (13.55±7.43), with no significant difference. There was a highly significant difference between the anti- Toxoplasma Antibody IgM (2.00±1.17) and the control group (0.09±0.17), and between anti- Toxoplasma Antibody IgG (14.20±7.06) and the control group (0.06±0.11) and between the IL-1β level (56.84±18.87) and the control group (88.09±14.85). There was also a highly significant difference between the mean anti- Toxoplasma Antibody IgM (2.00±1.17) and the mean anti- Toxoplasma Antibody IgG (14.20±7.06). The mutation occurrence in IL-1β gene (rs 1143634C>T, the complete nucleotide sequence of the amplified exon in the region was determined. The cytosine was substituted by thymine at the site (rs 1143634) in toxoplasmosis. Expression of IL-1β gene was investigated in Toxoplasma gondii among aborted women and healthy controls using qRT-PCR, and the findings of amplification were explained showing atypical amplification plot. Amplification reaction has an early threshold cycle that is consistent with highly levels of IL-1β gene and healthy controls.

Full article

Journal ID : **TMJ-01-12-2021-10837** Total View : **387**

Title : QUALITY OF LIFE AND MENTAL STATUS OF PATIENTS WITH MULTIPLE SCLEROSIS-CITY OF MOSUL_IRAQ

Abstract :

This study was conducted as a descriptive study to determine the quality of life (QoL), mental states and affecting factors in Multiple Sclerosis (MS) patients receiving treatment in an Ibn Sina Teaching hospital, City of Mosul, Iraq. The sample of the study consisted of 100 patients with MS diagnosed in Ibn-Sina teaching Hospital, City of Mosul, Iraq; who were being treated in the Neurology Diseases Clinic and were followed up in the outpatient clinic and accepted to participate in the study. "Short Form SF-36" and General Health Questionnaire -12 were used as data collection tools. In the analysis of the data, descriptive statistics, independent groups t test, Mann Whitney U test were used. 64.6% of the patients participating in the study were women, 64.4% were married, 44.4% were not working. 11.1% of the patients had a family history of MS and 13.3% were using assistive devices. It was determined that 26.8% of the patients had a high risk of experiencing mental problems. The mean score of the General Health Questionnaire-12 scale of the patients using assistive devices was significantly higher ($p<0.05$). According to the results of the study, it was determined that the QoL of MS patients was low and the mental status of nearly half of the patients was not good.

Full article

Journal ID : **TMJ-01-12-2021-10836** Total View : **376**

Title : Vitamin D3 In Patient With Hepatitis B And C And Renal Failure

Abstract :

The level of Vitamin D3 was estimated in hepatitis patient with type B and type C virus suffering from renal failure at period of summer 2019, in (Lab. Health Center) in AL-Najaf Al-ashraf, it includes 80 patients, 40 males (20 HBV & 20HCV) and 40 females (20 HBV & 20HCV) aged between 25 to 50 years. These patients diagnosed as hepatitis patient all with renal failure for both sexes. The result have a significant elevate in level of AST, ALT and ALP in addition significant decrease in the level of vitamin D3 (8.14±3.6), in male patient when compare with control (27±5.6), female patient (8.02±2.9), when compare with control (16.5±3.9), and no significant elevate in level of urea and creatinine.

Full article

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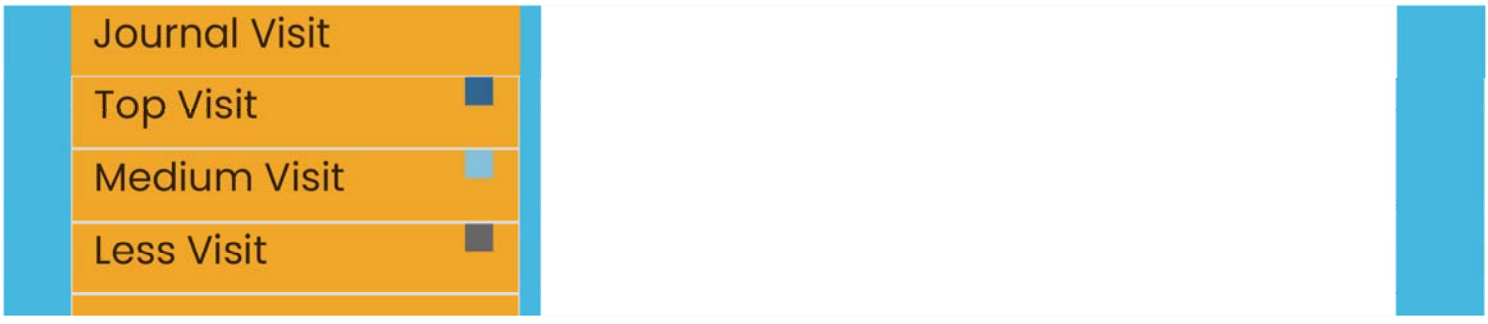

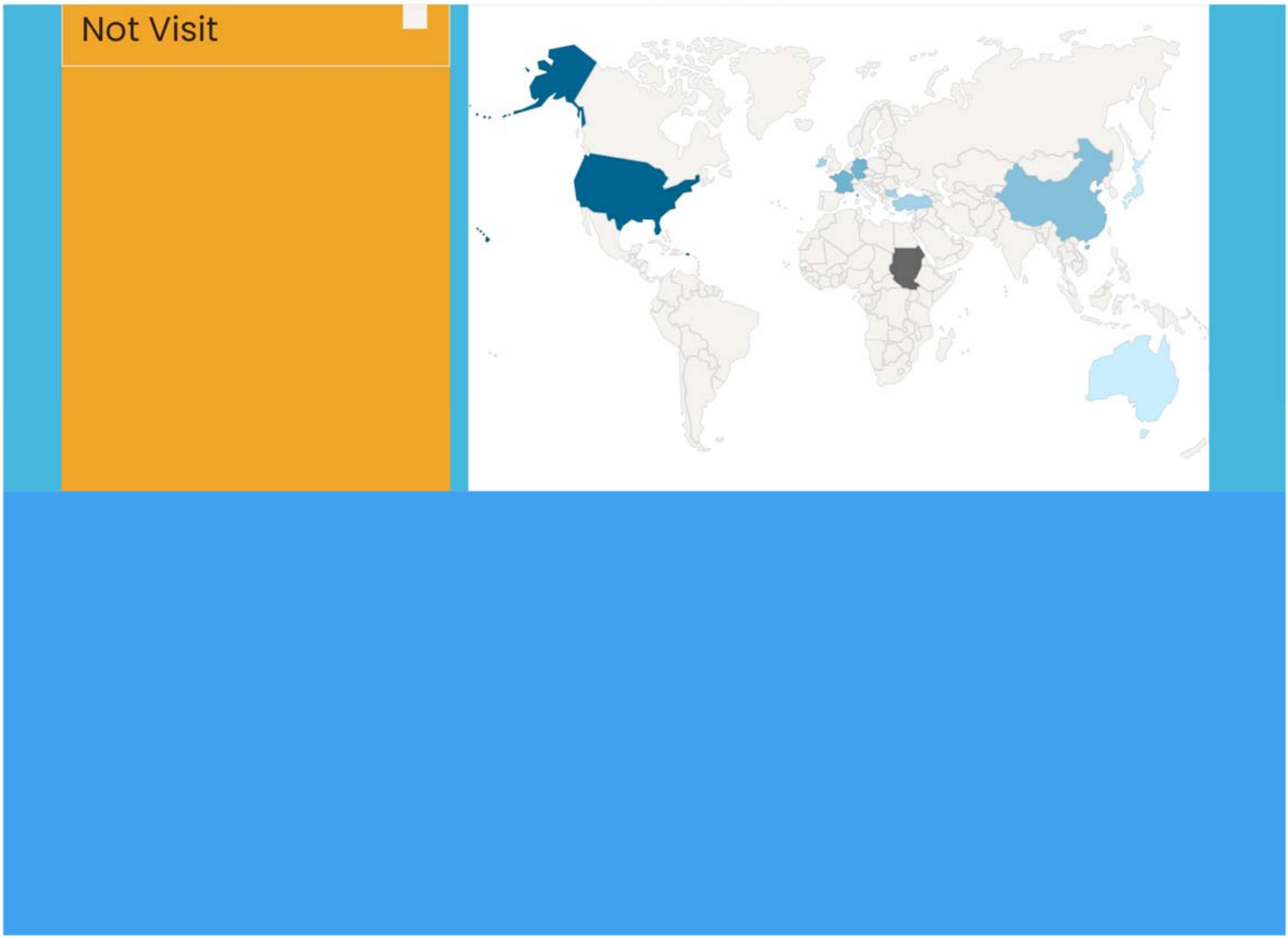
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Journal ID : **TMJ-17-12-2021-10901** Total View : **386**

Title : Effect of Pulsed Radiofrequency and Hydrosection by Normal Saline Injection Compared with Local Anesthetics on Myofascial Trapezius Muscle Syndrome

Abstract :

To evaluate the effect of ultrasound-guided PRF stimulation and hydro-section by normal saline injection compared to local anesthetic effects on myofascial trapezius muscle syndrome. A randomized clinical trial study that conducted at pain clinics in Baghdad / Iraq for a period from Jun. 2020 to Dec. 2021. It included 40 adult patients diagnosed with myofascial pain syndrome of trapezius muscle for more than two months of pain and no signs of inflammation or cervical disc herniation and randomly allocated to one of two groups: Group A included 20 patients underwent ultrasound-guided PRF and hydrodissection with normal saline plus 40 mg of lidocaine and group B included 20 patients received a mixture of normal saline plus 40 mg of lidocaine by ultrasound. Follow up and evaluation were done for patients by using numerical rating scale for pain before procedure and after two, four, and eight weeks of treatment. No significant differences in age, gender, body mass index, pretreatment pain and duration of pain between study groups. Pain was significantly decreased two, four, and eight weeks after treatment in both groups compared to that before treatment. It was significantly lower in group A four and eight weeks after treatment than that in group B. No difference between PRF and injection of lidocaine in short term relieving of pain but PRF was preferred as a long term relieving of pain in addition to the safety and cost-effective property, noninvasiveness, and easy to be performed so that it can be useful in repeated outpatient clinics.

Full article

Journal ID : **TMJ-15-12-2021-10893** Total View : **394**

Title : Epidemiological Study and Detection of Trichomonas Vaginalis Parasite in Holy Karbala Governorate

Abstract :

Trichomoniasis is the most prevalent sexually transmitted disease(STD) non-virus caused worldwide. The current study aim to detection of T.vaginalis infection in vaginal secretions and urine samples to studying its relationship with other types of bacterial and fungal pathogens associated with infection with this parasite, as well as finding the relationship between demographic factors and research results. In this study the vaginal wet mount for 232 females were collected and urine samples from same patients as well as 25 samples from healthy female (control) were collected with different ages ranged between (14-58) years who attended the hospitals and medical clinics from different regions of Karbala province from the period Nov.1, 2020 to June.5, 2021. Wet mount preparation, direct Gram smear, and GUE results showed the highest infection rate was 02 (8.62%) with T.vaginalis, general exam was the best test used in this study to detected the T. vaginalis. The statistical analysis was done by using statistical package for social science program (SPSS version 24), Chi-Square test ($\chi 2$) was used to determine relationship between the infection rate and variables that used in the current study and percentage, with a probability (p) value of 0.05 or less were considered as statistically significant.

Full article

Journal ID : **TMJ-15-12-2021-10892** Total View : **386**

Title : Effect of Tooth Loss and Chewing Ability on Cognitive Function of Community Dwelling Elderly

Abstract :

Tooth loss among older people is highly prevalent worldwide. Reduced number of teeth may be associated with impaired chewing ability and cognitive impairment. This study aimed to assess the association between low number of remaining teeth and cognitive function in a group of elderly in the community. A cross-sectional study was carried out on 152 older adults aged 60 years and above from four elderly activity centres in Kuala Lumpur, Malaysia. Clinical oral examination was conducted to determine the oral health conditions of respondents, which include number of remaining teeth, presence of denture and history of dental caries. The validated Malay version of Mini-Mental State Examination (MMSE) was used to assess their cognitive function. Low cognitive status was defined as having MMSE score of less than 24. The mean number of teeth present was 12.0 ± 9.6, with 23.7% had total tooth loss (edentate). Lower MMSE score (<24) was found in 34.9% of the respondents. A significantly higher percentage of respondents with reduced number of teeth and chewing difficulty had lower MMSE score. Significant positive correlation was also found between number of remaining teeth and MMSE score (r=0.30; p<0.01). Chewing difficulty and reduced number of teeth were significantly associated with cognitive decline among the elderly. Maintenance of optimum number of teeth can be an important factor for cognitive function. Longitudinal studies are needed to further explore the relationship.

Full article

Journal ID : **TMJ-15-12-2021-10890** Total View : **409**

Title : Etiopathophysiology and Management of Aggression in Elderly

Abstract :

Aggression is a common condition in the elderly. Aggression in the elderly can have an impact on decreasing the patient's and their families quality of life. Aggression in the elderly is associated with dementia, socioeconomic factors as well as biological factors. The type of dementia related to aggression is frontotemporal dementia. Biological factors that play a role are neurotransmitters, genetics, gender and hormones. Meanwhile, the socioeconomic factors that play a role in aggression in the elderly are financial condition and also the relationship between the patient and his family. Treatment for aggression in the elderly can be divided into psychotherapy and pharmacodynamics. Anger management therapy and cognitive behavioral therapy are the psychotherapy of choice in cases of aggression in elderly.

Full article

Journal ID : **TMJ-15-12-2021-10889** Total View : **395**

Title : Impact of an Educational Program on Nurses' Awareness of Infection Control at Primary Health Care Centers in Al-Ramadi City

Abstract :

The study aimed to evaluate the effectiveness of the educational program on nurses' awareness of preventive measures for infection control. To determine the relationship between nurses' awareness and their sociodemographic data. A quasi-experimental design was conducted to evaluate the impact of the educational program on nurses' awareness of infection control from 20 January 2021 to 20 September 2021. Twenty-eight primary health care centers from Sectors I and II were selected. Through inclusion and exclusion criteria, a purposeful sample of (60) male and female nurses working in primary health care centers was selected. The participants were divided into two groups (the study group or the control group), where the first group received the educational program. Study data were collected through interviews and the use of a specially designed two-part instrument. The study found that before implementing the program, both groups had a low level of awareness about preventive measures, but after implementing the program, the study group showed a significant improvement in nurses' awareness about preventive measures for infection control at a high level (2.73). While the control group remained at the same score (1.48). Prior to implementing the program, the study revealed that the nurses had poor awareness of infection control precautions. However, with a high degree of engagement in the educational program, these characteristics in the study group considerably increased in post-test. In the original test, there was no significant association between the relationship, nurses' awareness, and demographic information, except for the nurse's awareness (educational level and training courses). The study recommends the implementation of the national infection control program in all health institutions, emphasizing continuous medical education programs for all property working in health institutions, and continuous follow-up to the application of the program to prevent infection of patients and workers, and focus on holding seminars and lectures on an ongoing basis on infection control.

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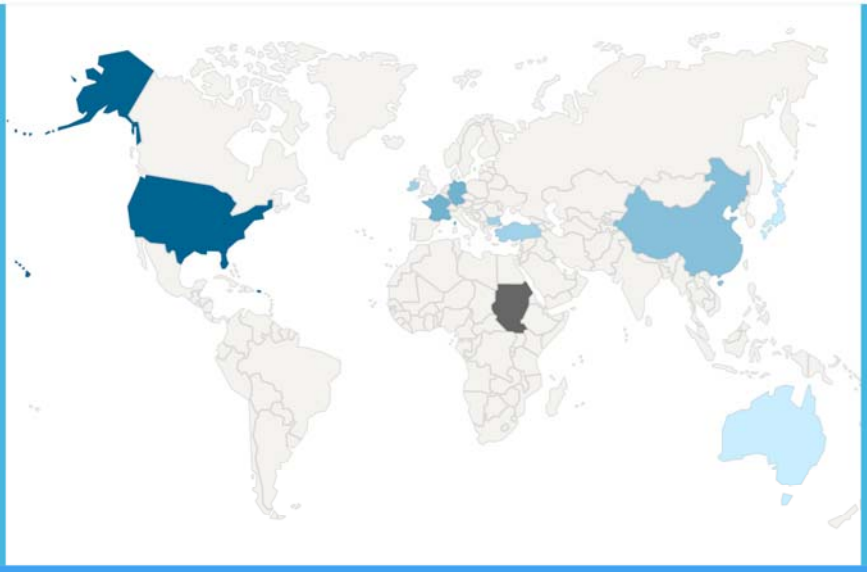

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Journal ID : **TMJ-14-12-2021-10888** Total View : **482**

Title : Technical Factors and Lesion Characteristics Affecting Cytology Positivity in Conventional TBNA for Mediastinal Lymphadenopathy without ROSE

Abstract :

Conventional transbronchial needle aspiration (cTBNA) for mediastinal lymphadenopathy without rapid on-site cytological evaluation (ROSE) remains an essential diagnostic modality, especially in resource-limited settings. This study aims to determine the technical factors and lesion characteristics that influence positive cTBNA cytology. This is an observational study that utilized the primary data of station 4R and station 7 mediastinal lymphadenopathy patients based on chest CT scans at the Persahabatan Hospital, Jakarta, Indonesia, from November 2019 to February 2020. An analysis of lymph node sites, lymph node size, needle size, needle puncture method, TBNA sampling sets, and the number of needles passed with positive cytology results were performed. A total of 33 subjects underwent 33 cTBNA procedures on lymph nodes stations 7 and 4R. There were 20 positive TBNA results (60.6%) consisting of 18 malignant and two M. Tuberculosis infection cases. Station 7 lymph nodes had greater positive TBNA results than station 4R lymph nodes (75% and 47.1%, respectively). Lymph node sizes ≥30 mm had more positive TBNA results than lymph node size <30 mm (53.8% vs. 36.4%). 21G needles showed more positive cTBNA results than 19G needles (68.2% and 45.5%, respectively). The TBNA sampling 1-2 set group showed 55.6% positive cytology, while the TBNA sampling 3-4 sets group showed 66.7% positive cytology results. A total of 10-14 passes showed 70% positive cTBNA results, while 15-20 needles passed showed 56.5% positive TBNA results. 21G TBNA needle was associated with positive cTBNA cytology without ROSE.

Full article

Journal ID : **TMJ-14-12-2021-10887** Total View : **393**

Title : PTPN22 Gene Polymorphism in Egyptian Patients with Vitiligo

Abstract :

The Vitiligo is an autoimmune polygenic disorder, characterized by loss of pigmentation due to melanocyte destruction. Multiple genes and environmental triggers are thought to play a role in inducing vitiligo. Etiological hypothesis suggested for etiopathogenesis of vitiligo include gender, immunological, neuro-hormonal and other environmental factors. Genes possibly play a role in all aspects of pathogenesis of vitiligo. Most genes associated with vitiligo are involved in immune regulation and immune targeting of melanocytes. These genes and environmental factors differ across different population. Vitiligo is the most common depigmenting disorder, with a prevalence of approximately 0.5-2% in the world population. Single- nucleotide polymorphisms (SNP) in protein tyrosine phosphatase non-receptor 22 gene (PTPN22) have been linked with the development of several autoimmune disorders. PTPN22 gene is located on chromosome 1p13 and encodes a lymphoid protein tyrosine phosphatase which is important in a negative control of T-cell activation and also in T-cell development. The degree of the association between 1858C/T (SNP) and different autoimmune disorders is not the same among different ethnic population. The purpose of the present work was to investigate the association between an inherited genetic polymorphism at 1858C/T in the PTPN22 and vitiligo in Egyptian patients. The present study included 50 vitiligo patients and 49 apparently healthy age and sex matched subjects as control group. Patients were recruited from the outpatient clinic of Dermatology and Andrology Department Benha university hospitals. All studied individuals were subjected to complete history taking and complete clinical examination. Patients were classified into three types (vitiligo vulgaris, acrofacial and generalized) and disease extent was assessed by body surface area (BSA) score. This study included 2 groups patients group included 50 patients with vitiligo, 14 males (28%) and 36 females (70%), and control group included 49 healthy, age and sex matched individuals. This sample of individuals was selected randomly from population in Qalyubia Governate. Results of the present study showed a statistically insignificant difference between vitiligo patients and control groups regarding the frequency of PTPN22 (C1858 T) genotypes and alleles.

Full article

Journal ID : **TMJ-14-12-2021-10886** Total View : **398**

Journal ID : **TMJ-14-12-2021-10886** Total View : **398**

Title : Dermoscopic Features of Some Inflammatory Dermatoses in Iraqi Patients

Abstract :

The Dermoscopy is an inexpensive in vivo and non-invasive technique that permits the visualization of morphologic features of the epidermis and papillary dermis that are not visible to the naked eye. Previously, dermoscopy had been used in differentiating malignant pigmentary disorders, but the use of dermoscopy has recently been extended to the diagnosis of non pigmentary skin disorders by defining the characteristic vasculature. Beside to traditional use, dermoscopy is more and more used in the assessment of other general dermatologic conditions, namely scalp and hair disorders (trichoscopy), nails abnormalities (onychoscopy), skin infections and infestations (entomodermoscopy) and cutaneous inflammatory diseases (inflammoscopy). Among the list of new applications of dermoscopy, the study of inflammatory dermatoses is probably the most promising topic in terms of development and usefulness, considering the large number of such disorders and the frequent problems in their differential diagnosis which the dermatologist encounters in daily clinical practice.

Full article

Journal ID : **TMJ-14-12-2021-10885** Total View : **403**

Title : Psychiatric Health as The Dominant Factor of Covid-19 Symptom

Abstract :

Strictly implementing health protocols have been campaigned continuously during the Covid-19 pandemic. However, the number of positive cases of Covid-19 keeps growing and reaches even more than thousands of cases per day. This study aims to determine the dominant factor of the Covid-19 symptom using a binary logistic regression model. This is a cross-sectional study using 415 respondents from the productive age population in Yogyakarta. The data collected was Covid-19 symptoms experienced by respondents in the last 14 days and 8 variables sourced from the health protocol and the Depression Anxiety Stress Scale. The instrument used was an online questionnaire. Data was collected for 1 month, which was at the beginning of the outbreak (March-April 2020). The data obtained were analyzed by Binary Logistic Regression. The results showed that the dominant factors for the Covid-19 symptom were psychiatric health condition affected the mild symptom shifting to severe symptom, but the handwashing activities and the body immune did not affect the shifting. If people with mild symptoms have severe psychiatric health conditions, they would have a 9 times risk shift into severe Covid-19 symptoms. and if people with mild symptoms have mild psychiatric health conditions, they will have 5 times the risk of shifting into severe Covid-19 symptoms. In conclusion, the dominant factors that affect the occurrence of the mild symptom shifting to severe symptom were psychiatric health conditions and the risk factor was 5-9 times. People had to pay more attention to keeping psychiatric health conditions so that they would not shift into severe symptoms.

Full article

Journal ID : **TMJ-14-12-2021-10883** Total View : **386**

Title : Obese School Children Assessment During COVID-19 Pandemic

Abstract :

School closure policies in all countries during COVID-19 pandemic can increase the incidence of obesity in obese school children. The aim of this research was to assess the nutritional status, eating habits, and physical activity of obese school children during the pandemic. This is a cross-sectional study at the two elementary schools with the highest prevalence of obesity in South Jakarta. Anthropometric data were collected at respondents' homes while food consumption and daily activity were collected online. The 24-hours-recall and food consumption analysis were used. Statistical analysis data used SPSS, ($p = 0.05$). Of 52 students, 33 were classified as obese, and 19 students were classified as overweight. The proportion of obesity incidence and waist circumference for height was significantly higher ($p < 0.05$) in boys than girls. There was a significant difference ($p<0.05$) in energy and carbohydrate intake between overweight and obese students. The average energy intake and carbohydrate of overweight students were 74.42% RDA (Recommended Dietary Allowance) and 64.23% RDA, respectively, while obese students were 87.00% RDA and 86.33% RDA, respectively. The average physical activity a day was around 9-12 minutes, and secondary activities such as watching TV, playing games, and surfing the internet are more than 3 hours per day. This can conclude that during the pandemic, the proportion of obese and centrally obese children was higher than overweight children. They habitually consume high-calorie density foods, while the intake of fiber such as vegetables and fruit was very low. The physical activity of all students was low.

Full article

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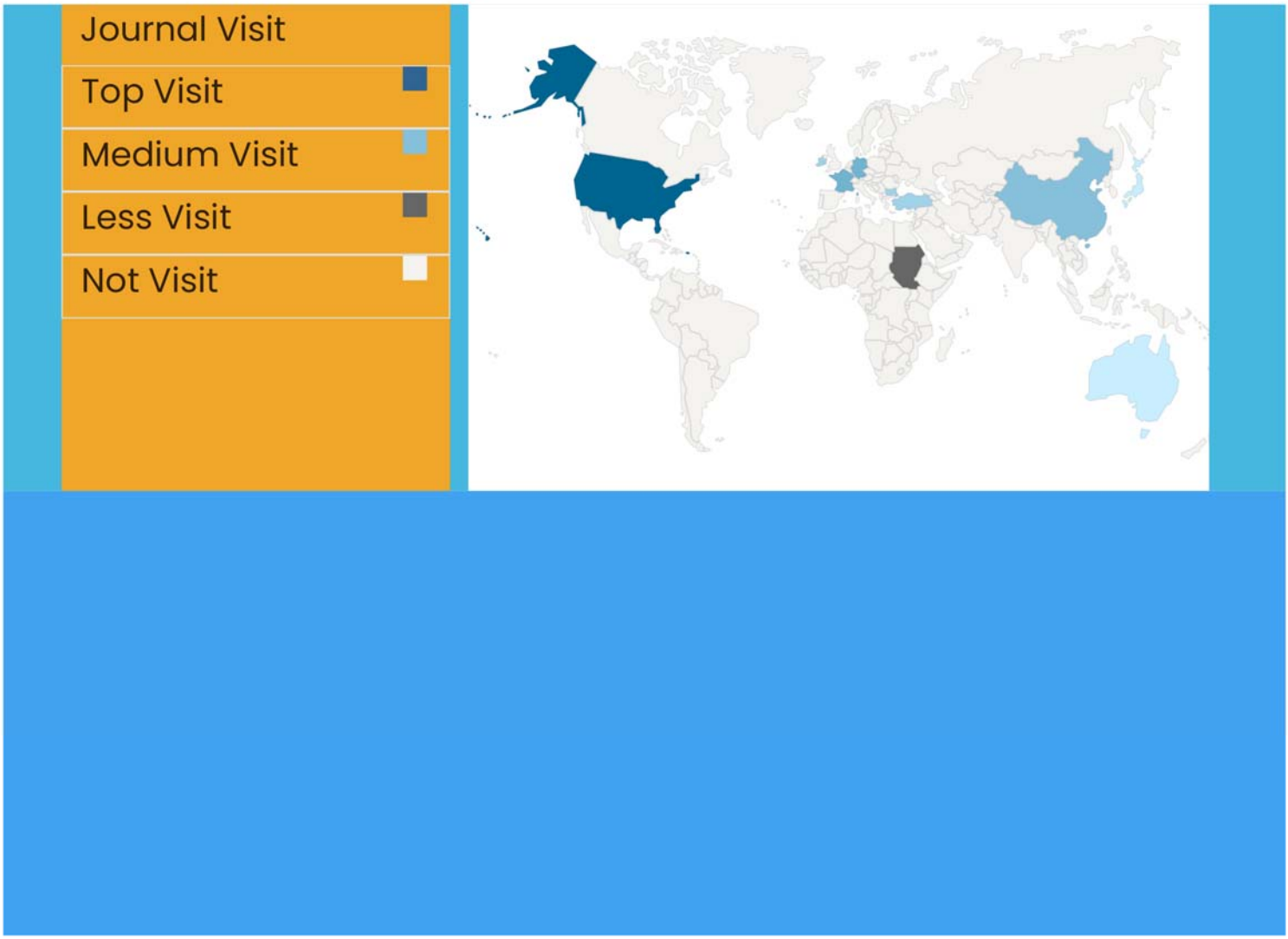

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Archive- Teikyo Medical Journal

Journal ID : **TMJ-13-12-2021-10880** Total View : **392**

Title : ISOTRETINOIN and GLUTATHIONE COMBINATION vs ISOTRETINOIN ALONE ON SEVERE ACNE VULGARIS

Abstract :

Acne vulgaris (AV) is a chronic inflammation of pilosebaceous unit that is common in teenagers. According to its severity degree, AV can be categorized as mild, moderate, and severe. One of its alternative therapies on severe AV is isotretinoin. Oxidative stress affects the formation of acne vulgaris, therefore the antioxidant is considered as an additional therapy. Glutathione is of the antioxidants which has a protective effect on oxidative stress. Two male patients age of 20 years old suffered from severe AV for approximately a year. Both of the patients had several therapies but had not improved, by which one patient being treated with the combination of isotretinoin and glutathione and the other with isotretinoin alone for 4 weeks. Inflammation is one of the factors on the pathogenesis of AV. Isotretinoin as the first retinoid generation which functions as antiinflammation and immunomodulator, is one of the alternative therapies on mild AV. Oxidative stress is one of the causes of inflammation on AV. Glutathione is an antioxidant which functions as a protection to the oxidative stress. There is an improvement on severe-degree AV which treated with the combination of isotretinoin and glutathione as well as with isotretinoin alone.

Full article

Journal ID : **TMJ-12-12-2021-10879** Total View : **418**

Title : The effectiveness of mobile SMS based counselling method for increasing knowledge and awareness about HIV/AIDS and decreasing patients: a systematic review and meta-analysis protocol

Abstract :

Heterogeneous results have been reported in several studies that use the efficiency of the mobile SMS intervention technique to increase knowledge and awareness about HIV/AIDS and reduction, requiring a systematic review to obtain a comprehensive summary of existing proof. Hence the purpose of this review is to gather accessible proof of the efficiency of the mobile counselling method based on SMS in increasing knowledge and awareness about HIV/AIDS and reducing the number of patients. Searches will be carried out in the PubMed / Medline, Scopus, Google Scholar, Cochrane Library and other articles reviewed up to December 2019 databases. Studies have been included that compare the prevalence of HIV/AIDS among the intervention group that was exposed to mobile SMS based counselling methods and the control group that was not exposed to such intervention. The study's primary outcome is the change in knowledge and awareness about HIV/AIDS and the risk of observed HIV/AIDS prevalence from baseline to post-intervention. It will include randomized controlled designs for study trials. Two independent reviewers will critically appraise selected studies. The data collected will include information on the review's questionnaire and goals about the strategies, populations, research methods and related outcomes. Effect sizes will be expressed as a risk ratio, and their 95 per cent confidence intervals will be determined for analysis. This study and meta-analysis will systematically analyse and incorporate the evidence available on the efficacy of mobile SMS-based counselling method to increase knowledge and awareness about HIV/AIDS and decrease patients. In this review, information will be gathered and summarized on the potential impact of mobile SMS based counselling for increasing knowledge and awareness about HIV/AIDS and decreasing patients. The findings from this study will provide guidance to future research and public health professionals with an understanding of the importance of mobile SMS-based counselling and provide guidelines for applicability of community-based intervention.

Full article

Journal ID : **TMJ-12-12-2021-10878** Total View : **413**

Title : Prevalence of Obesity-Related Health Disorders Detected During Preoperative Evaluation for Bariatric Surgery

Abstract :

Our research was conducted on 100 patients who underwent bariatric surgery due to morbid obesity in our metabolic and bariatric surgery clinic (Tikrit Hospitals) between October 2017 and March 2021 to determine the diseases that accompany or cause obesity with a multidisciplinary evaluation in the management of patients before bariatric surgery, we think that these determinations will enable us to predict the risk of preoperative mortality and postoperative success. Our research was conducted on 100 patients who underwent bariatric surgery due to morbid obesity in our metabolic and bariatric surgery clinic (Tikrit Hospitals) between October 2017 and March 2021. Anthropometric, physical examination and laboratory data were obtained and recorded retrospectively from the files and electronic records of each case. This research is a cross-sectional descriptive study, which is done by retrospectively examining the data of the patients, their files and electronic records. Our study was carried out in accordance with ethical rules. In the study group, the frequency of the diseases detected during the evaluation of the patients with a BMI > 40 kg / m2 with a multidisciplinary approach before bariatric surgery was used as data. Cases between the ages of 18-65 were included in the study. The records of 100 patients whose files were examined were evaluated. Of the patients, 64% were female, 36% were male, mean age was 48.6 years, and mean BMI was 39.7 kg/m2. In obesity patients, type-2 diabetes was detected in 13% hypertension in 32%, and metabolic syndrome in 64%. For the first time in this study, the prevalence of nodular goiter, thyroid cancer, adrenal adenoma, and gastric cancer before bariatric surgery was detected in obesity patients. Hypothyroidism and subclinical hypothyroidism found in 8% while Hyperthyroidism and subclinical hyperthyroidism recorded in 4%. Sleep Apnea plus Obstructive Sleep Apnea and Nodular goiter present in 48%. Regarding gastrointestinal problems; gallbladder disease 33%, Non-alcoholic fatty liver disease 63% and Gastro-esophageal reflux disease in 25%. In Depression and other Psychological Disorders there was a rate of 55%. Regarding Adrenal gland diseases, Non-functional adrenal adenoma represented in 7% and Cushing and Subclinical Cushing's syndrome in 4%.

Full article

Journal ID : **TMJ-11-12-2021-10877** Total View : **398**

Title : Nurses Knowledge, Attitude, and Practice Toward Respiratory Distress Syndrome in Neonate at Salah Al-Deen Governorate Hospital

Abstract :

Respiratory distress syndrome is a respiratory condition that affects newborns and is caused by an immature lung and a lack of surfactant. This study aimed to assess the nurse's knowledge, attitude and practice toward respiratory distress syndrome in neonates. A descriptive design study was conducted to assess nurse's knowledge, attitude and practice toward respiratory distress syndrome in neonates. this study carried out in the neonatal ward in the Salah Al-den governorate hospitals, from the 7th of October 2020 to the 1st of June 2021. A convenience sample of (75) nurses were selected in this study. Self-report questionnaire was constructed by the researcher based on the review of the literature and past experiences studies, Data analysis was estimated and evaluated using of statistical package for social science (SPSS)version25. The result of the study showed that majority of nurses (52%) had graduated from nursing secondary school and (81.3%) of them had no training course about respiratory distress syndrome, and more than half of study group (50%) had low level regarding knowledge, attitudes and practice. The current study concluded that More than half of the nurses in neonatal wards in Salah Al-Deen Governorate hospitals have low levels of knowledge, attitude, and practice regarding respiratory distress syndrome. nurses' knowledge correlated with demographic characteristics (age, education level, level of experience, and gender. nurse's attitude regarding RDS is affected by their gender, but not affected by Age, level of experience and their level of education. nurses practice regarding RDS is association with their gender and educational level, but not association with their age and level of experience. The majority of nurses in neonatal wards lack of training courses and continuous education regarding Respiratory Distress Syndrome. The study suggests that nurses should participate in ongoing education and training programs.

Full article

Journal ID : **TMJ-11-12-2021-10875** Total View : **404**

Title : Study of the activity of the Meprin alpha hormone and lipid profile parameters in patients with diabetes in Kirkuk city

Abstract :

Diabetes mellitus is a collection of metabolic illnesses marked by hyperglycemia caused by insulin production, insulin sensitivity, or both. Diabetes-related chronic hyperglycemia is linked to lengthy deterioration, malfunction, and destruction of multiple organs, including the retina, renal, brain, hearts, and circulatory system. Investigation roles of Meprin alpha hormone and lipid profile parameters in pathogenesis of diabetes. Our study show high levels of glucose, cholesterol, TG, LDL, VLDL, and meprin alpha hormone in patients with DM compared to control with high significant different ($p<0.05$). in contrast, our results revealed decreased levels of HDL in patients than controls high significant different ($p<0.05$). We concluded the Meprin alpha hormone is play a major role in pathogenesis of diabetic mellitus and have raised sensitivity in screening patients with diabetes.

Full article

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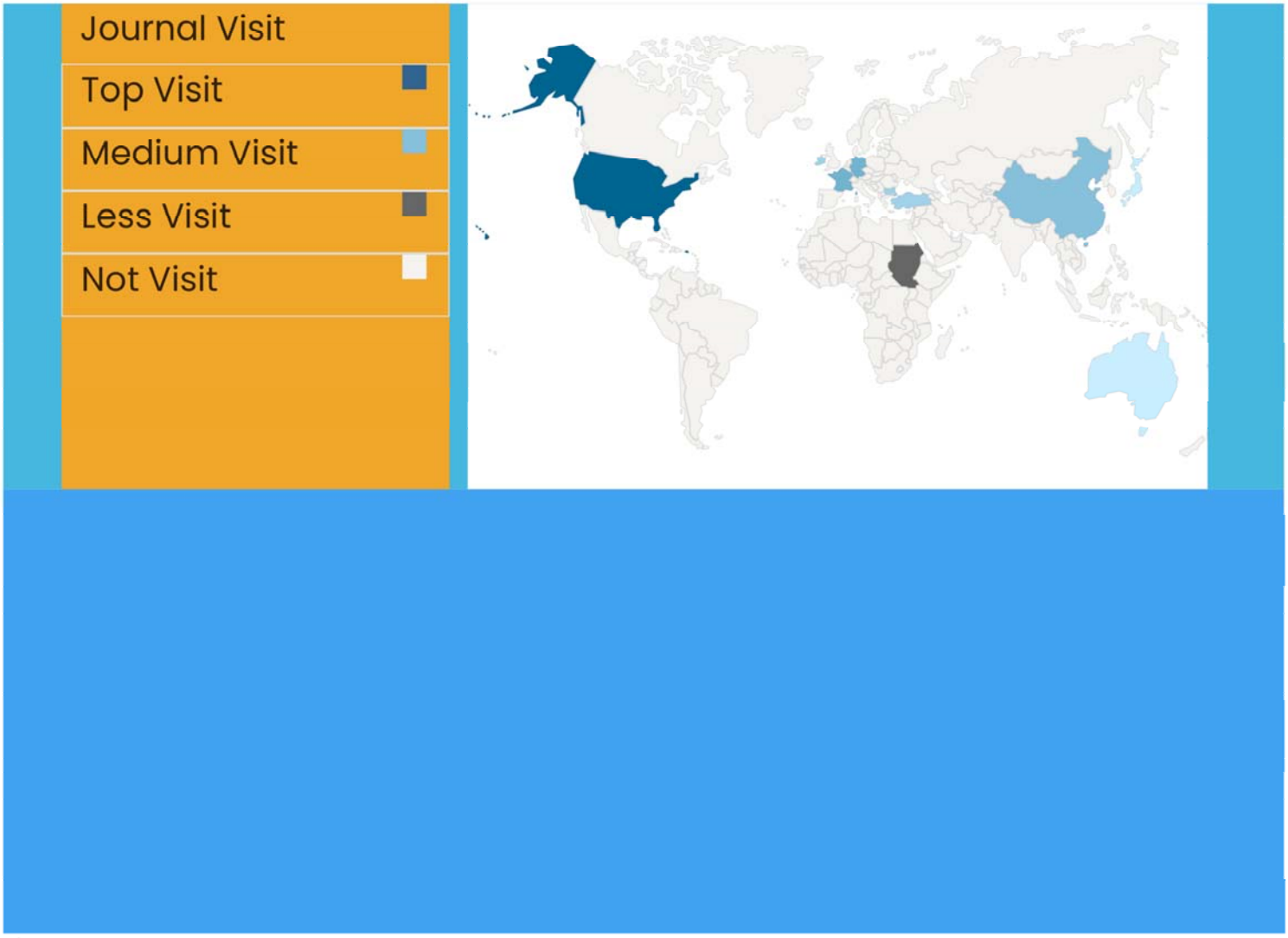

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Effects of Red Ginger (Zingiber officinale var rubrum) to Improve Lung Function in reducing the risk of COVID-19 in Stable COPD Patients

by Amelia Lorensia

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Effects of Red Ginger (*Zingiber officinale var rubrum*) to Improve Lung Function in reducing the risk of COVID-19 in Stable COPD Patients

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Keywords:
COPD, FEV1/FVC, infusion red ginger

ABSTRACT

Chronic obstructive pulmonary disease (COPD) is a major global health problem and has an impact on increasing healthcare costs and decreasing productivity. The use of natural therapy in the treatment of chronic diseases is an opportunity for Indonesia as a tropical country that has many variations of plants that have the potential to become herbal medicines. Infusion red ginger (Zingiber officinale var. rubrum) is one of the most widely consumed medicinal plants in Indonesia. This study at to determine the effectiveness of improving lung function in red ginger infusion in increasing the value of forced expiratory volume in 1 second (FEV1) and forced vital capacity (FVC) in COPD patients. The research method used was pre-post design in May until September 2021. Respondents were adult COPD patients domiciled in Mojoanyar districts, Mojokerto City. The study was conducted by examining lung function, then continued with 250 grams of red ginger steeping therapy for 4 months. Data analysis to examine the effectiveness of improving lung function in red ginger infusion in increasing the value of FEV1/FVC in COPD patients using t-test. Respondents used in this study were 21 people. The average age of the respondents was 53.24 years. The normality test showed that the average per month all data were normally distributed (Pvalue>0.05). Then continued with the t-test showing that there is a significant change every month (P value=0.000). Infusion of red ginger for 4 months was proven to be effective in increasing lung function from the parameter values of FEV1/FVC significantly.

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INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a major global health problem with an increasing disease burden and impact on health care spending. COPD is an irreversible airflow limitation. Conventional treatment is currently aimed at relieving symptoms, preventing recurrent exacerbations, maintaining optimal lung function and improving quality of life [1]. According to World Health Statistics, COPD will be the third leading cause of death in the world in 2030. Based on data obtained from Basic Health Research

(2013), COPD has a prevalence of 3.7% per one million population in Indonesia [2]. COPD has become like a ticking time bomb in Indonesia, because there are many conditions in the community with very high risk of COPD with impaired lung function but are not aware of it [3], [4]. COPD is a chronic disease that requires long-term therapy. Synthetic treatments are not always safe, and often lead to undesirable effects [5- 7] and medication nonadherence [8], [9]. The unsatisfactory treatment outcomes of conventional medicine, and the side effects associated with some drug classes, such as steroids and theophylline, have contributed substantially to the increasing popularity of complementary and alternative medicine and, in particular, herbal medicine [10], [11].

Patients with COPD have a higher prevalence of coronary ischemia and other factors that put them at higher risk for COVID-19-related complications. Several observational and case-control studies have confirmed a higher prevalence of cardiovascular disease in COPD patients than in the general population, possibly due to shared risk factors or associated pathogenic mechanisms. Despite major differences in studies evaluating the association between COPD and cardiovascular disease, COPD patients undoubtedly have a higher prevalence of coronary ischemia and other risk factors that may worsen the prognosis of COVID-19. Of the 31,633 COPD patients, 793 had a diagnosis of COVID-19. The proportion of patients with COVID-19 in the COPD population was significantly higher than in the general population aged >40 years. COPD was associated with a higher risk for poor disease outcome (combined end points included admission to an intensive care unit, invasive ventilation, or death), as reflected by a hazard ratio (HR) of 2681 (95% CI 1424–5,0480), after adjusting for with age and smoking. Compared with non-COPD individuals, COPD patients with COVID-19 exhibit a much poorer disease prognosis, as evaluated by hospitalization and mortality. Patients with COPD and COVID-19 had more comorbidities than non-COPD patients. Pneumonia was the most common diagnosis among COPD patients hospitalized for COVID-19 (59%); 19% of patients showed pulmonary infiltrates suggestive of pneumonia and heart failure. COPD patients with COVID-19 show higher rates of hospitalization and mortality, mainly related to pneumonia [12].

A strong immune system can help increase the body's resistance so as to reduce the risk in the midst of the COVID-19 pandemic [13], [14]. Chronic lung diseases such as COPD and asthma are at high risk of developing serious conditions if infected with COVID-19 [15- 17]. Data in the world show that 70% of deaths are caused by non-communicable diseases, such as asthma and COPD which account for 15% of deaths worldwide [18]. Chronic lung diseases (COPD, asthma, pulmonary fibrosis and lung cancer) are at high risk of developing serious conditions if infected with COVID-19. Patients with severe and/or uncontrolled asthma/COPD are at higher risk for more severe infections [13], [14].

Indonesia as a tropical country, has many variations of plants that have the potential to be herbal medicines. One of the plants that are commonly found is ginger (Zingiber officinale) [13]. Ginger (Zingiber officinale Roscoe) is a common and widely used spice. The health benefits of ginger are mainly attributed to its phenolic compounds, such as gingerols and shogaols [14]. Red ginger (Zingiber officinale var. rubrum) has higher anti-inflammatory and antioxidant properties than other types of ginger [15]. Red ginger is one of the most widely consumed medicinal plants in Indonesia. Red ginger contains phenolic compounds, namely gingerols and shogaols which show the greatest anti-inflammatory and antioxidant activity compared to other gingerols. Pharmacokinetic studies on ginger have been reported, but studies on red ginger are still lacking [16- 18]. Therefore, the preparation of red ginger can be a good opportunity in developing the potential of natural ingredients in Indonesia for the treatment of COPD. The antioxidant effect of ginger can help reduce the severity of lung function. COVID-19 patients are at a higher risk of developing the inflammatory response associated with serious and even fatal respiratory disease. Pulmonary inflammation, fever and fibrosis are symptoms of COVID-19 mediated by pro-inflammatory cytokines. Oxidative stress

affects the repair mechanism and immune control system which is one of the main events of the inflammatory response which allows us also to conclude that oxidative stress is the main factor that increases the severity of COVID-19 especially during chronic disease associated with fragility. antioxidant system, suggesting recommend antioxidant supplementation in a therapeutic strategy against COVID-19 [19]. In addition, ginger and its active components induce bronchodilation by modulating intracellular calcium ([Ca2+]i) in airway smooth muscle (ASM). In isolated human ASM, ginger caused significant and rapid relaxation. The purified ginger constituents were then tested for the relaxant properties of ASM in guinea pigs and the human trachea, namely gingerol, gingerol, and shogaol induce rapid relaxation of precontraction ASM (100–300 M), thus ginger may attenuate airway hyperresponsiveness, in part by altering ([Ca2+]i) [20]. Red ginger preparations commonly used in Indonesia are in the form of steeping. Ginger decoction is made by inserting 50 mg of ginger into 200 mL of water, boiled until the water volume becomes 100 mL [21]. Therefore, the antioxidant and anti-inflammatory effects of red ginger in addition to helping reduce the effect of reducing the risk of COVID-19 severity, can also help improve lung function. Pathogenic factors of COPD causing disease include infection and inflammation, protease and antiprotease imbalances, and oxidative stress that overwhelms antioxidant defenses. Smoking serves as a major risk factor for developing COPD and is also a major source of oxidants/reactive oxygen species (ROS) to the lungs and body in exposed individuals [22], [23].

Airflow limitation in COPD by causing chronic inflammation, structural changes, narrowing of the small airways, and damage to the lung parenchyma. This causes loss of alveolar attachment to the small airways resulting in decreased lung elasticity. This decrease in lung elasticity reduces the ability of the airways to remain open during expiration. Loss of small airways can also lead to airflow limitation and mucociliary dysfunction that characterize the disease [24]. This limitation of air can be measured by spirometry. Spirometry is a measure of lung function used to assess the severity of airway limitations based on FEV1 and FVC. The spirometry criteria for airflow limitation on post-bronchodilator measurements were FEV1 (forced expiratory volume 1 second) and FVC (forced vital capacity) ratio<0.70 [25- 27]. This study aimed to determine the effectiveness of improving lung function in red ginger infusion in increasing the value of FEV1/FVC in COPD patients.

2. METHODS

The design of this research was pre post design in May until September 2021. The variables were lung function by forced expiratory volume in 1 second (FEV1) and forced vital capacity (FVC). Lung function can be measured through spirometry measurements by FEV1/FVC ratio value, where an FEV1 value of <70% can be said to have impaired lung function. The value of FEV1/FVC was good if the results show ≥0.7 [28], [29]. The requirements that must be considered by each respondent before pulmonary function tests are carried out are as follows: No smoking for an hour before test; Didn't consume alcohol for the previous 4 hours before test; Not doing sports activities for the previous 30 minutes before test; Didn't eat for 2 hours before test; Didn't wear tight clothes; and no medication was taken before [30]. Measurement of lung function using a handheld spirometer where body mass index (BMI) data in the form of weight and height and respondent data in the form of gender, age, smoker or not are entered into the spirometer. Then the respondent was asked to stand or sit up straight, then the respondent is asked to inhale as deeply as possible through the mouth while closing the nose, then the tube contained in the spirometer is inserted into the mouth, making sure the lips tightly cover the tube wall and the tongue does not cover the tube opening, then breathe out. Exhale as hard and fast as possible in one second until there was no air left in the lungs. Examination with a spirometer can be done 3 times or more to get more accurate results. The results of the spirometer measurement from the respondent will determine whether the respondent has respiratory problems or does not experience respiratory problems based on the FEV1 value. FEV1 value <70% already

indicates respiratory problems. So if the value of FEV1 <70%, then it is categorized in the group of respiratory disorders and FEV1 70% is categorized in the group that does not experience respiratory disorders [31], [32].

The study population was adult COPD patients domiciled in Mojoanyar districts, Mojokerto City. Respondents (study sample) were part of the population with criteria >18 years old, didn't have digestive disorders related to nausea and vomiting, didn't have respiratory problems other than COPD, didn't experienced COPD exacerbations in the last 3 months, and didn't receive incentive care/inpatient in last 3 months.

The study was conducted by examining lung function (FEV1/FVC) (t0), then continued with 250 gram red ginger steeping therapy for 4 months, and pulmonary function examinations were carried out every month (t1, t2, t3, and t4). Data analysis to examine the effectiveness of improving lung function in red ginger infusion in increasing the value of FEV1/FVC in COPD patients using t-test.

3. RESULTS

3.1 Characteristics of Respondents

Respondents used in this study were 21 people. The average age of the respondents was 53.24 years. Most of the respondents had habit >20 cigarette consumption per day (12 of 21) and the most of brinkman index was moderate (19 0f 21) (Table 1). Data on lung function per respondent showed an average monthly increase in lung function (Table 2).

Table 1: Frequency Distribution of Respondents Characteristics

Characteristics		Frequency (n=21)	Percentage (%)
Gender	Male	21	100
Age (years)	36-45	1	4,76
	45-55	13	61,90
	>55	7	33,33
Habit of cigarette consumption per day (cigarette sticks)	1-10	2	9,52
	11-20	7	33,33
	>20	12	57,14
Brinkman Index	Mild (0-200)	2	9,52
	Moderate (200-600)	19	90,48

Table 2: Profile of Lung Function of Each Respondent

No. Respondent	Lung Function (FEV1/FVC) (%)				
	t0	t1	t2	t3	t4
1	81	82	84	85	85
2	82	83	82	84	84
3	45	49	48	48	48
4	52	53	51	53	55
5	72	71	72	72	74
6	71	71	72	71	72
7	50	46	48	50	50
8	71	71	72	73	73
9	70	71	71	71	71
10	71	73	70	71	72
11	45	47	45	46	47
12	56	57	60	60	60

13	70	69	70	70	71
14	67	68	68	68	68
15	61	62	62	61	62
16	53	53	53	55	54
17	55	56	55	56	57
18	59	60	60	60	60
19	61	62	63	63	65
20	57	58	57	58	58
21	57	58	57	58	58
Average	**62,19**	**62,86**	**62,86**	**63.48**	**64.00**

t0: before red ginger therapy
t1: after 1 month receiving red ginger therapy
t2: after 2 months of receiving red ginger therapy
t3: after 3 months of red ginger therapy
t4: after 4 months of red ginger therapy

The normality test showed that the average per month (t0, t1, t2, t3, and t4) all data were normally distributed (Pvalue>0.05) (Table 3). Then continued with the t test showing that there is a significant change every month (P value <0.05) (Table 4).

Table 3: Normality test

Pulmonary Function Examination Time	Shapiro-Wilk Test	
	P value	Conclusion
t0	0.374	P Value>0.05, There were data with normal distribution
t1	0.442	P Value>0.05, There were data with normal distribution
t2	0.528	P Value>0.05, There were data with normal distribution
t3	0.468	P Value>0.05, There were data with normal distribution
t4	0.472	P Value>0.05, There were data with normal distribution

t0: before red ginger therapy
t1: after 1 month receiving red ginger therapy
t2: after 2 months of receiving red ginger therapy
t3: after 3 months of red ginger therapy
t4: after 4 months of red ginger therapy

Table 4: Statistical Test of Changes in Lung Function Values

Pulmonary Function Examination Time	Dependent t-test	
	P value	Conclusion
t0 to t1	0.000	P Value <0.05, There was a significant difference between 2 groups
t0 to t2	0.000	P Value <0.05, There was a significant difference between 2 groups
t0 to t3	0.000	P Value <0.05, There was a significant difference between 2 groups
t0 to t4	0.000	P Value <0.05, There was a significant difference between 2 groups

4. DISCUSSION

This study involved male respondents, because the data from most of the initial studies showed that the risk of patients experiencing COPD and death from COPD was greater for men than women [33], but data from developing countries showed the prevalence of COPD in men and women was the same, which may reflect changes in tobacco smoking patterns [34]. The average age of the respondents was 53.24 years, these structural changes in the aging lung have a clear effect on overall lung function, and several physiological parameters are altered after aging. Both FEV1 and FVC decline with age, and the rate of decline has been

shown to be higher in men than in women. As a consequence of decreased elasticity and compliance of the chest wall, residual volume increases, while vital capacity decreases. Interestingly, total lung capacity did change with age, because the decrease in recoil elasticity observed with aging is offset by a decrease in chest wall compliance and chest muscle strength. Although the distribution of alveolar ventilation and perfusion in the lungs is highly heterogeneous as a result of a decrease in alveolar surface area, pulmonary capillary density and pulmonary capillary blood volume, the lung's overall transfer capacity for carbon monoxide decreases with age. Clinically, this may predispose to physical activity and the development of respiratory distress during sleep [35].

COPD morbidity can affect other comorbid conditions (such as cardiovascular disease, musculoskeletal disorders, diabetes mellitus), which are also related to smoking status and age. COPD was also more common at the age of >40 years than <40 years, and was more common in males than females. Most of the increase in COPD mortality was due to the growing epidemic of smoking, decreased mortality from other common causes of death such as ischemic heart disease, infectious diseases [1].

Other factors that can affect changes in lung function are

a. Genetics. A common genetic deficiency is alpha-1 antitrypsin (AAT) deficiency, which is associated with emphysema. The pathophysiology of AAT deficiency is associated with a protease-antiprotease imbalance and an incidence of <1% of COPD cases [1], [36], [37].

b. The risk of exposure to other particles, such as occupational exposures (organic and inorganic dust and chemical agents) is a risk factor for COPD that is not given much attention. A large analysis of the American population of 10,000 adults aged 30-75 years found the fraction of COPD attributable to work was 19.2% of all, and 31.1% of non-smokers [1]. Tobacco smoking was the greatest risk factor for COPD, which has a greater prevalence of respiratory symptoms and lung function abnormalities with reduced FEV1 and mortality compared to non-smokers [1], [38]. This study involved respondents who smoked, but did not analyze further the therapeutic effect of red ginger on lung function.

There are 2 types of cigarettes sold in Indonesia, including kretek cigarettes, namely raw materials or contents in the form of tobacco leaves and cloves which are given a certain taste and aroma effect. Kretek cigarettes contain about 20 mg of tar and 44-45 mg of nicotine, while white cigarettes are the contents of these cigarettes only tobacco leaves which are given a sauce to get a certain taste and aroma effect. White cigarettes contain 14-15mg of tar and 5mg of nicotine. Clove cigarettes are more dangerous than white cigarettes because the nicotine and tar content in kretek cigarettes is higher and kretek cigarettes do not use a filter so that all combustion products from cigarettes will be inhaled and enter the respiratory tract [39], [40]. Tobacco use for a long time is associated with an increased likelihood of developing COPD, frequent productive cough, frequent shortness of breath and can affect physical activity even after controlling the smoking habit. It was also explained that former smokers, who had stopped smoking for 10 years had a lower prevalence of COPD and respiratory symptoms than those who were still smokers. The results showed that the differences in the duration of smoking for less than 10 years, 10 years to 20 years, and more than 20 years in the rickshaw driver respondents were differences in lung function measurements. However, in some respondents this did not happen, perhaps due to the influence of other factors such as age, exposure to harmful particles, and the development of lung function as children. The use of cumulative cigarette consumption in the future can show a consistent relationship between lung disease and non-smokers, former smokers and smokers who are distinguished by the number of cigarettes smoked a day [4]. The Brinkman index is used to see the degree of severity or severity of smoking by using the formula for multiplying the average number of cigarettes smoked a day multiplied by the length of smoking in years. There is a

significant relationship between the degree of smoking and the severity of COPD, and a strong correlation between the two [4], [40].

c. Malnutrition is a common and serious problem in COPD patients, especially those with emphysema. COPD patients with emphysema have a lower body mass index (BMI) than COPD patients with chronic bronchitis [41], [42]. Body weight and BMI are risk factors for mortality in COPD [43]. Malnutrition in COPD is associated with complications and increased mortality. COPD patients with low body weight have lower diffusion and exercise capacities than COPD patients with normal weight. Decreased body cell mass is associated with reduced diaphragm and respiratory muscle mass. Malnutrition is also associated with decreased immune status, so that unwanted complications can occur, such as nosocomial lung infections and hypercapnic pulmonary failure [44].

The effectiveness test of red ginger for handling COVID-19 can be developed by observing the NF-b parameter, which is an important mediator in COVID-19. Hyperactivation of the nuclear factor kappa-light-chain-enhancer of the activated B cell (NF-B) pathway has been implicated in the pathogenesis of the severe/critical COVID-19 phenotype. NF-B is a complex protein system that is present inactive in the cytoplasm along with inhibitory proteins known as NF-B inhibitors (IκBs). Upon stimulation (induction), phosphorylation of IκBs by IκB kinase (IKK) leads to nuclear translocation of NF-B, binds to their cognate DNA and activates transcription of a wide variety of genes involved in host immunity, inflammation, cell proliferation and apoptosis. Inducers of NF-B are highly variable and include bacterial lipopolysaccharides, ionizing radiation, reactive oxygen species (ROS), cytokines such as tumor necrosis factor alpha (TNF-α) and interleukin 1-beta (IL-1β) as well as viral DNA and RNA. Immunomodulation on the level of NF-B activation and inhibitor of NF-B degradation (IκB) together with inhibition of TNF- would potentially result in a reduction in cytokine storm and reduce the severity of COVID-19. Inhibition of the NF-B pathway has a potential therapeutic role in reducing severe forms of COVID-19 [45].

5. CONCLUSION

Infusion of red ginger for 4 months was proven to be effective in increasing lung function from the parameter values of FEV1/FVC significantly.

6. ACKNOWLEDGMENTS

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7. CONFLICT OF INTEREST

The authors have no conflicts of interest regarding this investigation.

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