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SPIRONOLACTONE INDUCED GYNECOMASTIA- A CASE REPORT

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ABSTRACT

Gynecomastia is proliferation male breast tissue due to an imbalance in estrogen and androgen action. Though it is rare it causes anxiety, embarrassment and physical discomfort in the affected male. This case report is of a 69-year-old male patient who presented with the symptom of painful swelling in his both breasts. He is suffering from hypothyroidism, type 1 diabetes mellitus and myocardial infarction from past few years and using Eltroxin, Atorvastatin, Aspirin, Clopidogrel, Glimipride and Metformin. He was also diagnosed with clinically controlled Congestive Cardiac Failure (CCF) for which he was prescribed Lasilactone (Furosemide 20mg and Spironolactone 50mg) and developed enlargement of his breast after 9 months of treatment and diagnosed by the physician as bilateral gynecomastia. The physician withdrawn Lasilactone and added Furosemide 40mg. but the poor prognosis of his pedal edema caused by his CCF made the patient to take Lasilactone and the symptoms of gynecomastia recurred again. Diagnosing drug induced gynecomastia and discontinuing the drug causing it will prevent the need of surgery for gynecomastia.

KEYWORDS: Spironolactone, Gynecomastia, Case report.

INTRODUCTION

Benign proliferation of male breast glandular tissue due to imbalance between estrogen action relative to androgen action at the breast tissue level appears to be the main etiology of gynecomastia.^[1] Asymptomatic gynecomastia is more common in healthy adult male with a prevalence of 32-65% and the prevalence of symptomatic gynecomastia is lower.^[2] Though there may be several endocrine etiologies which will affect hormonal balance for gynecomastia. Its association with drugs is not fragile.^[3] Gynecomastia coexists with many pathological conditions, including chronic liver disease, which is of unquestionable epidemiological importance for the Polish population. Another common trigger for gynecomastia -inducing mechanisms may be drugs, affecting the hormonal balance.^[2] Drug-induced gynecomastia is common and might account for a quarter of all cases, including those among children.^[3] The drugs that can cause gynecomastia are listed in Table 1. Although the mechanisms by which many medications induce gynecomastia are not yet understood, some mechanisms are clear.^[4] This is a case report of 69year

old male who developed spironolactone induced gynecomastia.



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A Case Control Study on Factors Influencing Suicide Attempts

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ABSTRACT

Aim: We aim to study psychosocial, socio-demographic and personality related factors associated with suicide attempts. **Methods:** From 1st September 2018 to 28th February 2019, we conducted a hospital-based case control study in Department of Psychiatry, Government General Hospital, Guntur, India. One hundred forty-five cases and one hundred forty five age and sex matched controls were selected for study. Eysenck Personality Questionnaire, Modified kuppuswamy scale, Presumptive Stressful Life Event Scale, Suicide Intent Scale were used. Statistical analysis was done using computerized software. **Results:** Majority (n=69, 47.58%) of the suicide attempters were between 21-30 years of age. The number of suicide attempters are more in rural areas than in urban areas and it is statistically significant with an Odds Ratio 2.39. The risk of suicide attempts is more in people who are uneducated (OR - 1.51). It was observed that being an alcoholic will increase the risk of suicide attempt (OR-1.73). The average of PSLES score of individuals is more in case group (166.8) than control group (111.386). Having a family history of suicide attempts will increase the risk of suicide attempt (OR -2.28). **Conclusion:** Residing in rural areas, alcoholism, having no support from family members and having more stress full life events emerged as predominant risk factors for attempting suicide.

Key words: Suicide attempt, Socio-demographic factors, Personality traits, Stressful life events, Suicide intent, Psychiatric illnesses.

INTRODUCTION

Suicide can be defined as death caused by self-directed injurious behaviour with an intent to die as a result of the behaviour whereas Suicide attempt is a non-fatal, self-directed, behaviour with an intent to die as a result of the behaviour; might not result in injury.¹ Suicide attempt may occur up to 20 times more frequently than completed suicide. Suicide attempt is mostly associated with adverse long-term situations like psychiatric and medical comorbidity, hospitalization, repeated suicide attempts, poverty, chronic stress and stigma.² India's contribution to global suicides increased about 11.3% from 1990 to 2016. India comprised about 17.8% of world population but accounted for 36.6% of suicides among women and 24.3% among men in 2016.³ A total number of 6226 suicides were reported in Andhra Pradesh in the year 2015 among them 1916 that is 30%

of the suicides were due to illness which is the 3rd highest percentage share in all India average of suicides due to illness. Rate of suicides in Andhra Pradesh during the year 2105 is 12.1 per one lakh population.⁴ Suicidal behaviour has a large number of hidden (under) causes. The factors that place people at risk for suicide are complex and interact with one another. Identifying these factors and understanding their roles in suicidal behaviour are central to prevent suicides.⁵ People with a diagnosed mental health condition are shown to be at a higher risk of attempting and completing suicide,⁶ with more than 90% of suicides and suicide attempts having been found to be associated with a psychiatric disorder. Across the globe, the highest rates of suicide were associated with depressive disorders across the globe.⁷ In order to clearly understood the role of

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Factors leading to failure of firstlineanti retroviral therapy (ART); a retrospective study in indianteritiary care government settings

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Abstract

Background

HIV is a lenti virus that causes HIV infection in humans in which progressive failure of immune system allows life threatening opportunistic infections and cancers to thrive. So it is important to study the factors that lead to failure of first line ART.

Aims and Objectives

To find out the factors leading to failure of first line ART like socio-demographic factors, clinical factors, immunological factors, virological factors etc. To assess the CD4 count in subjects using first line and second line ART. To assess the viral load in subjects who failed first line ART.

Methodology

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Abstract

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INTRODUCTION

NEED OF THE STUDY

Aim and objectives

Aim

Objectives

METHODOLOGY

Study Design

Study Period

Study Site

Sample Size

Materials Used

Inclusion Criteria

Exclusion Criteria

Data Collection

Statistical Analysis

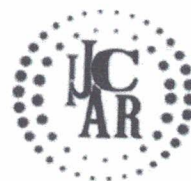
RESULTS

CD4 COUNT

CORRELATION BETWEEN THE FAILURE CD4 COUNT AND VIRAL LOAD AT TIME OF TREATMENT FAILURE AUGUST-2017

DISCUSSION

Conclusion



ASSESSMENT OF HEALTH RELATED QUALITY OF LIFE IN HYPERTENSIVE PATIENTS IN RURAL POPULATION OF GUNTUR DISTRICT IN SOUTH INDIA

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Hypertension, Health related quality of life, SF-36 questionnaire.

ABSTRACT

Background: Hypertension is considered as one of the leading causes of death and disability, and its prevalence is rapidly increasing in developing countries. Adequate treatment of high blood pressure lowers the cardiovascular risk and other complications like vascular disease, and chronic kidney disease. However, the major problem for controlling hypertension is compliance with treatment

Aim and Objectives: To study and assess the quality of life in patients suffering from hypertension.

Methodology: A prospective observational cohort study was conducted for a period of 6 months in a rural area of Guntur. A total of 300 hypertensive patients who are newly diagnosed or suffering from hypertension since 3 years were recruited. Blood pressure was measured by using a sphygmomanometer and other demographics were collected. Health related quality of life was assessed by using 36-item short form (SF-36) and respective scores were calculated.

Results: By using SF-36 questionnaire Physical health (49.4) was the component mostly effected in hypertensive patients followed by Vitality (61.75), emotional aspects (69.06), pain (67.3), social functioning (78.54), appear to be least effected.

Conclusion: Proper treatment and awareness about hypertension is necessary to improve patient's quality of life. Good compliance not only improves the clinical outcomes, it is also having a great impact on improving quality of life and reducing health care costs which are due to complication and co-morbidities of hypertension.

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INTRODUCTION

Hypertension is one of the most common chronic disease affecting humans and is a major risk factor for stroke, myocardial infarction, vascular disease, and chronic kidney disease. Due to the associated morbidity and mortality and cost of disease to society, preventing and treating hypertension is an important public health challenge now-a-days. Modern life is full of hassles, deadlines, frustrations and demands. Mental stress or psychosocial stress is one of the major risk factor for hypertension, which it is the risk factor for various other cardiovascular diseases.

The Constitution of the World Health Organization (WHO) defines health as "A state of complete physical, mental, and social well-being not merely the absence of disease". It follows that the measurement of health and the effects of health care must include not only an indication of changes in the frequency and severity of diseases but also an estimation of

well-being and this can be assessed by measuring the improvement in the quality of life related to health care. WHO defines Quality of Life as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.^[1]

Quality of life (QOL) is a broad multidimensional concept that usually includes subjective evaluations of both positive and negative aspects of life.

- HRQOL is related to both self-reported chronic diseases (diabetes, breast cancer, arthritis, and hypertension) and their risk factors (body mass index, physical inactivity, and smoking status).
- Measuring HRQOL can help determine the burden of preventable disease, injuries, and disabilities, and can provide valuable new insights into the relationships between HRQOL and risk factors.
- Measuring HRQOL will help monitor progress in achieving the nation's health objectives.^[2]

The QOL construct, implemented presently, includes a framework for assessing personal outcomes, a social construct

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IMPACT OF MEDICATION ADHERENCE IN HYPERTENSIVE PATIENTS IN RURAL POPULATION OF GUNTUR DISTRICT IN SOUTH INDIA

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Hypertension, Medication
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Patient compliance

ABSTRACT

Aim and Objectives: To study and assess the impact of medication adherence in patients suffering from hypertension.

Methodology: A prospective observational cohort study was conducted for a period of 6 months in a rural area of Guntur. A total of 300 hypertensive patients who were newly diagnosed or suffering from hypertension since 3 years were recruited. Blood pressure was measured by using a sphygmomanometer and other demographics were collected. Medication adherence was assessed using the HILL-BONE compliance to high blood pressure therapy scale (HILL-BONE CHBPTS).

Results: Hill-Bone scores were analyzed in the aspects of medication compliance, salt usage, appointment keeping and observed a modest improvement in all aspects with an average of 8.49.

Conclusion: Proper treatment and awareness about medication and their usage will improve medication adherence. Good medication adherence not only improves the clinical outcomes, it is also having a great impact on improving the quality of life and reducing health care costs which are due to complications and co-morbidities of hypertension. Clinical pharmacists play a vital role in improving the adherence by providing periodic counselling, which in turn helps to reduce the burden of illness.

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INTRODUCTION

Hypertension is one of the most common chronic diseases affecting humans and is a major risk factor for stroke, myocardial infarction, vascular disease, and chronic kidney disease. Due to the associated morbidity a mortality and cost of disease to society, preventing and treating hypertension is an important public health challenge now-a-days. Modern life is full of hassles, deadlines, frustrations and demands. Mental stress or psychosocial stress is one of the major risk factor for hypertension, which in turn is the risk factor for various other cardiovascular diseases.^[1] Adherence is referred as "active, voluntary, and collaborative involvement of the patient in a mutually acceptable course of behavior to produce a therapeutic result. Adherence and compliance are often interchangeable synonymous terms. In patients with hypertension, adherence to medication is critically important for controlling blood pressure and reducing associated risk of cardiovascular complications.^[2] Compliance consists of three components, namely, acceptance of medication prescribed, adhering to it and continuing with it. Thus compliance is a complex and dynamic health enhancing behavior that involves

acts of appointment keeping, obtaining and ingesting medications and persisting with a health provider. Compliance with treatment at the individual level improves the quality of life by preventing complications and thereby premature death.^[3] There is a positive relationship between levels of adherence and knowledge regarding treatment. When patients have positive beliefs regarding the efficacy of their treatment and also trust that their medication is working well to control their illness, their adherence often improves.^{[6][12]}

In the rural areas most of the people are illiterate and lack awareness on condition and medications. Some of the barriers include poor provider-patient communication, inadequate knowledge about a drug and its use, not being convinced of the need for treatment, fear of adverse effects of the drug, long term drug regimens, complex regimens that require numerous medications with varying dose schedules, cost and access barriers. Adherence to therapies is a primary determinant of treatment success. Failure to adhere is a serious problem which not only affects the patient, but also the health care system.^[4] Patient counseling was provided verbally either to patients or to their representatives regarding directions of medication

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SIMULTANEOUS UV SPECTROPHOTOMETRIC METHOD FOR THE ESTIMATION OF AZITHROMYCIN AND CEFEXIME IN COMBINED DOSAGE FORM

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ABSTRACT

A UV SPECTROSCOPY method was developed and validated for quantitative determination of Azithromycin and Cefexime in pure and tablet dosage forms. Simple, accurate and reproducible spectrophotometric methods have been developed for the simultaneous estimation of Azithromycin and Cefexime in pharmaceutical tablet dosage forms. The method involved the determination using the Simultaneous equation method, the sampling wavelengths selected are 275 nm and 240 nm over the concentration ranges of 2.5-12.5 µg/ml and 2-10 µg/ml for Azithromycin and Cefexime respectively. The results of the analysis were validated statistically and recovery studies were carried out as per ICH guidelines.

Keywords: Azithromycin, Cefexime, UV Spectrophotometer, Methanol.

INTRODUCTION

Azithromycin

Azithromycin chemically (2R,3S,4R,5R,8R,10R,11R,12S,13S,14R)-2-ethyl-3,4,10-trihydroxy-3,5,6,8, 10,12,14-heptamethyl-15-oxo-11-[[3,4,6-trideoxy-3-(demethyl amino)-D-xylo-hexopyranosyl]oxy]-1-oxa-6-azacyclopentadec-13-yl-2,6-dideoxy-3-C-methyl-3-O-methyl-α-L-ribo-hexopyranoside (Fig 1). It is antibiotoxic, antibacterial. Treatment of community acquired pneumonia and pelvic inflammatory disease caused by susceptible organisms. Includes- Staphylococcus aureus, Streptococcus pneumonia [1].

Cefexime

Cefexime chemically (6R,7R)-7-[[2-(2-amino-1,3-thiazol-4-yl)-2-(carboxy methoxy imino) acetyl]amino]-3-ethenyl-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid (Fig 2). Cefixime is an antibiotic useful for the treatment of a number of bacterial infections. It is a third generation cephalosporin. It is on the World Health Organization's List of Essential Medicines, a list of the most important medication needed in a basic health system. Hence attempts were made to develop simultaneous estimation of Azithromycin and Cefexime in pharmaceutical dosage form by UV Spectroscopy.

MATERIALS AND METHODS

Pure drugs of Azithromycin and Cefexime were obtained from Chandra labs pvt ltd., Hyderabad. The commercial formulations of Azithromycin and Cefexime are available in the ratio of 5:2 (Cefolac-AZ) (500/200mg) as tablets. Analytical technologies limited UV/VIS spectrophotometer with 1cm matched quartz cells were used for all the special measurements. All the chemicals used were of A.R Grade. Standard stock solution was prepared. 25 mg standard Azithromycin was weighed accurately and transferred to a 25 ml volumetric flask and dissolved in methanol. The flask was shaken and volume was made up to the mark with methanol to give a solution of 1000 µg/ml. From this solution, 10ml of solution was pipette out and placed into 100 ml volumetric flask. The volume was made up to mark with double distilled water to give a solution containing 10 µg/ml. Standard solution of 10µg/ml of Azithromycin and Cefexime were scanned in the wavelength range of 200-400nm. Wavelengths of Azithromycin 275 nm, wavelength of Cefexime 245 nm were selected for formulation of the simultaneous equation method. The absorptivities (A1%, 1 cm) of both the

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MICROWAVE ASSISTED SYNTHESIS, QSAR AND MOLECULAR DOCKING STUDIES OF 2,4-THIAZOLIDINEDIONE DERIVATIVES

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ABSTRACT

Synthetic organic chemistry involves selection and optimization of lead, synthesis and characterization of work for practical purposes. A series of new thiazolidinedione derivatives have been designed and synthesized through microwave-assisted technique. The synthesized compounds were screened by Insilco methods like molecular docking, QSAR studies in order to explore the anti-diabetic activity, synthetic assessability of compounds against the peroxisome proliferator-activated the receptor (PPAR γ). Compounds which showed higher glide score than standard (Pioglitazone) were synthesized using the microwave. Compounds were characterized with the help of FT-Infrared spectroscopy, Proton NMR, C-13 NMR spectroscopic studies and Lc-Ms.

Keywords: Anti-diabetic activity, Peroxisome proliferator-activated receptor (PPAR γ), 2, 4-thiazolidinedione derivatives, pioglitazone, Molecular Docking.

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INTRODUCTION

Thiazolidinediones (TZDs) are known to minimize insulin levels, lipid and plasma glucose and also used in the treatment of hyperglycemia^{1,2}. Peroxisome proliferator-activated receptor gamma (PPAR γ) has been recognized as a target of the TZDs because of PPAR γ agonistic activity, which is related to glucose-lowering activity³⁻⁵. PPAR γ is evidenced predominantly in adipocytes, it is involved in the retinoid X receptor (RXR) within the nucleus. The thiazolidinedione side chain with the lipophilic nature passes into the cells and binds to PPAR γ with more affinity by causing a conformational change in the PPAR γ -RXR complex which causes transcription of insulin-sensitive genes taking part in glucose uptake and lipoprotein lipase (LPL), lipogenesis⁶. These observations have been promoted to synthesize the title compounds with more efficacy and minimize the toxicity of a diabetic drug by directing the drug to its target and sustaining its concentration at the site for an adequate time for curative action to take place.

According to a survey on Thiazolidinediones (TZDs) class of PPAR γ agonists, quantitative structure-activity-relationship (QSAR) studies reveal that the molecule consists of three regions: (1) Effector site, (2) Binding site and (3) Linker^{7,8}. TZD ring makes more specific bonding interactions with different amino acids(Fig.-1)⁹. Docking study also reveals that the presence of the thiazolidinedione ring shows good antidiabetic activity¹⁰.

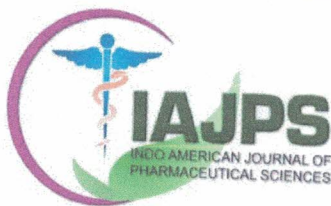
Based on the results of QSAR and docking studies, various new thiazolidinediones are aimed to synthesize. Molecules are synthesized based on the synthetic accessibility and good glide scores in order to reduce the wastage of chemicals and environment pollution. A series of 23 antidiabetic agents were designed moreover by altering electron donating/withdrawing groups on sterically hindered aromatic ring

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Research Article

ASSESSMENT OF INDIVIDUAL SLEEP DISTURBANCES IN TYPE-2 DIABETES MELLITUS: AN INTERVENTIONAL STUDY

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Abstract:

Background: Diabetes mellitus is a widespread disease, associated with rapid social and cultural changes, such as aging of population, urbanization, dietary changes, reduced physical activity, and unhealthy behaviours, leading to lower quality of life and decreased survival of affected individuals. This study aims to evaluate the sleep quality in patients with type 2 diabetes mellitus (T2DM), and to assess the relevance of other factors to sleep quality.

Methods: A cross-sectional study was carried out at the Government general hospital, Ananthapuramu, during the period from December 2020 to May, 2021. A total of 384 patients with T2DM were recruited. Data were collected using the Pittsburgh sleep quality index (PSQI) and ESS to assess the sleep quality with a cutoff point of PSQI ≥ 8 . Participants' demographic background data were also recorded. Statistical analysis was conducted by using graph pad prism.

Results & discussion: Using Scale scores with cutoff point global PSQI ≥ 8 for sleep evaluation in our study, we found that 77.6% of T2DM patients suffer from poor sleep quality. Our study found that poor sleep quality was higher in employed diabetic patients, as compared to unemployed patients. This study showed that diabetic patients on insulin treatment were 2.17 times more likely to complain of poor sleep quality compared to patients receiving OHA only.

Conclusions: Effectiveness of patient counselling by clinical pharmacist which improves the sleep quality. Thus patients reporting with sleep difficulties should be screened for diabetes. Type 2 diabetes patients with poor glycaemic control should be assessed for sleep disorders and if present it should be corrected to achieve optimum control of blood sugar levels.

Keywords: Daytime dysfunction, Diabetes mellitus, ESS, Glycaemic control, PSQI, Sleep quality

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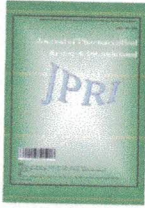
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Prescribing Pattern in Geriatrics with Cardio Vascular Diseases using Beers Criteria

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Authors' contributions

This work was carried out in collaboration among all authors. Authors EPK and LR designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors VS, PRR, BJ, NS and KS managed the analyses of the study. Author MPK managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Aim: Cardiovascular disease (CVD) is a major health problem throughout the world and a common cause of premature morbidity and mortality. CVD is a general category of diseases that affects the heart and the circulatory system. The main aim of the study is to assess the prescribing pattern in geriatrics with cardiovascular diseases using beers criteria.

Study Design: Prospective observational study.

Results and Discussion: Total 132 patients, 12 dropouts due to lack of information. Out of 120 patients 69 Patients are identified as Male Patients and 51 Patients are Female. In 120 sample size Maximum No of Cases were found with Ischemic Heart disease (30.8%) Followed by myocardial infarction (24%) coronary artery disease (20%) congestive heart failure (13.3%) Unstable Angina (11.6%). In 120 Sample Size, Male Patients are Suffering More with Complications Compared to Female Patients.

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Clinical Efficacy and Safety Profile of Lurasidone Comparing with Risperidone: Randomized, Open Label, Clinical Study

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Authors' contributions

This work was carried out in collaboration among all authors. Authors VS, LR and TR designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors JTR, EPK, MPK, MKS, TS, YY and BS managed the analyses of the study. Authors BN and MM managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

There are diverse studies which afford evidences that risperidone is as effective as second generation antipsychotics in treating positive symptoms and more effective in treatment of negative symptoms. This study is intended to find the clinical efficacy and safety profile of lurasidone comparing with risperidone, a drug in common use nowadays. Patients aged between 18 to 60yrs, Patients with new onset of symptoms who fulfil the ICD-10 criteria for a primary diagnosis of schizophrenia and Patients having a total PANSS score of ≥ 80 including a score ≥ 4 (moderate) on two or more of positive subscale at baseline. Patients with acute exacerbation of schizophrenia who remained drug free for at least last 6 months also included. Demographic data of the patients were collected. Baseline investigations like BP, complete blood count, lipid profile, blood sugar, renal function test and liver function test were done. Severity of schizophrenia at baseline was

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Covid-19 Infection: The Perspectives on Age-Dependent Difference in Immune Responses and Immunological Strategies to Reduce Viral Burden

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Abstract

Covid-19 is caused by the novel strain of Corona virus named as SARS-CoV-2 because of its homology with SARS infection and it is first detailed in Wuhan, China in December 2019. From that point forward, it has spread globally, already contaminating a large number of individuals worldwide and has been proclaimed as a pandemic by the WHO (World Health Organization) on March 2020. SARS-CoV-2 causes acute respiratory infection with fluctuating seriousness in various age groups, wherein geriatric patients in general will have serious disease. In children it is moderately spread till-date. A few contrasts in the pathogenesis of Covid-19 among pediatric and geriatric patients have been proposed to clarify these differences. Severe Covid-19 disease is associated with high and persistent viral burdens in the elderly patients. Children have strong innate immune response because of trained immunity (secondary to live-vaccines and frequent viral infections), leading to presumably early control of infection at the site of entry and also the risk factors associated with children were very less as compared to elderly individuals. The expression of primary target receptor for SARS-CoV-2, i.e. angiotensin converting enzyme-2 (ACE-2), decreases with age which has lung defensive effects and the severity of the disease can be explained by the presence of enzyme called Furin. Henceforth, this review will highlight the clinical features, disease pathogenesis, age-dependent difference in immune responses and immunological strategies to reduce viral burden.

Keywords: Covid-19; SARS-Cov-2; Immunopathogenesis; Viral burden

Abbreviations

ACE-2: Angiotensin Converting Enzyme-2; ARDS: Acute Respiratory Distress Syndrome; ADE: Antibody Dependent Enhancement; BCG: Bacille Calmette-Guerin; Covid-19: Coronavirus Disease 2019; CDC: Centers for Disease Control and Prevention; CTLs: Cytotoxic T lymphocytes; CCR: CC Chemokine Receptor; CD: Cluster of Differentiation; CXCL: C-X-C Motif Chemokine Ligand; DTH: Delayed Type of Hypersensitivity; G-CSF: Granulocyte Colony Stimulating Factor; HLA: Human Leukocyte Antigen; HCoV: Human Coronavirus; IP-10: Interferon-Gamma Inducible Protein 10; IFN: Interferon; IL: Interleukin; IgG: Immunoglobulin G; IgM: Immunoglobulin M; ICU: Intensive Care Unit; MERS-CoV: Middle East Respiratory Syndrome Coronavirus; MHC: Major Histocompatibility Complex; MDA5: Melanoma Differentiation-Associated Protein 5; MCP1: Monocyte Chemoattractant Protein-1; mAbs: Monoclonal Antibodies; MIP-1A: Macrophage Inflammatory Protein 1 Alpha; mTOR: Mammalian Target of Rapamycin; PAMPs: Pathogen-Associated Molecular Patterns; PRRs: Pathogen Recognition Receptors; RNA: Ribonucleic Acid; RBD: Receptor-Binding Domain; rRT-PCR: Real-Time Reverse Transcription Polymerase Chain Reaction; SARS: Severe Acute Respiratory Syndrome; SARS-CoV: Severe Acute Respiratory Syndrome Coronavirus; scFv: Single Chain Variable fragment; TMPRSS2: Transmembrane Protease Serine 2; TNF- α : Tumor Necrosis Factor- α ; TLR: Toll-Like Receptor; TGF- β : Transforming Growth Factor β ; T1IFN: Type 1 Interferon; WHO: World Health Organization.

Introduction

The Coronavirus Disease-19 (Covid-19) pandemic brought about by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was first announced in Wuhan, China in December 2019. From that point forward, it has spread globally, already contaminating large number of individual worldwide. Starting at 30 June 2020, 213 countries have announced Covid-19 cases, with an all out number that came to above 10.3 million, the most being in the USA (2.6 million), Brazil (1.4 million), Russia (640 thousand), India (548 thousand) and

UK (314 thousand). USA has the most elevated number of deaths (126 thousand) followed by Brazil (58 thousand), UK (44 thousand) and Italy (35 thousand). The overall case casualty rate over all communities is 4.9% [1].

“Corona” freely signifying as “halo” or “crown” in Latin alludes to the structure seen by the capsid and RNA. “Corona virus” was really named during the imaging of the viral family Coronaviridae, because of the round state of the virus itself. Covid-19 is brought about by the novel strain of Corona virus named as SARS-CoV-2 because of its homology with SARS disease and has been proclaimed as a pandemic by the WHO (World Health Organization) on March 2020 [2]. More than 100 years since the episode of the 1918 flu pandemic, we currently appear to confront another pandemic. The episode of the new Coronavirus (SARS-CoV-2) contamination is spreading to every continent, constraining us to live with this virus for maybe quite a while. Researchers and clinicians have learned quite a bit about Covid-19, and its pathogenesis. Among more than 1000 patients investigated in Wuhan, with the exception of at times in children and adolescence, it contaminates the various age groups equitably. About 15% of the affirmed cases progress to the serious stage, despite the fact that there is a higher possibility for patients more than 65 to advance into the extreme phase [3]. SARS-CoV-2 causes intense respiratory contamination with shifting seriousness in various age groups, wherein old in general will have serious disease, in children it is moderately spread till-date [4]. Several distinctions in the pathogenesis of Covid-19 among children and adults have been proposed to clarify these differences [5]. It has been seen that less children contract Covid-19 and among infected, children have less

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Assessment of Adverse Drug Reactions and Drug-Drug Interactions in Polypharmacy among Geriatrics in a Tertiary Care Hospital

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Abstract: Polypharmacy is defined as the use of multiple medications by a single patient which is commonly observed among geriatric patients. The use of multiple medications has been shown to predispose patients to adverse drug reactions, drug-drug interactions and medication non compliance particularly in geriatric population. It is a Prospective Observational Study was conducted in a Tertiary care Hospital for a period of 6 months. The Patients who meet the inclusion criteria are recruited. The demographic details and baseline characteristics like age, gender, Social history, are taken. Data obtained from their case sheets and through direct patient interview. Assessment and evaluation of adverse drug reactions and drug-drug interactions is performed by using WHO causality assessment scale, stockley's drug interactions, Medscape and their frequencies are studied. In Our Study, Out of 287 Patients 72 ADRs and 22 drug interactions were observed. In those mostly Metformin and ceftriaxone causing ADRs in elderly patients. Out of 22 drug interactions the most prescribed Combinations Drugs Glimipride With Ranitidine, and Furosemide with metformin causes Hypoglycemia. In these Mild Drug interactions were 9 Moderate Drug interactions were 5 and Severe Drug interactions were 7.

Increasing age and polypharmacy were identified as the predictors of ADRs and Drug-drug interactions. The clinical pharmacist must remain attention in assessing, monitoring and preventing of Adverse Drug Reactions and Drug-drug interactions and making appropriate dosage or therapy adjustments.

Key words : Adverse drug reaction, Drug interactions, Polypharmacy

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I. Introduction

Polypharmacy generally described as the existing of 5 or more medications by the similar patient^{1,2}.

Measures to avoid polypharmacy in geriatrics are Avoid unnecessary drug therapy, Treat the cause rather than symptom, Drug history, Choosing the drug, Dose titration, Choosing the right dosage form, Packaging and labelling, Good record keeping, Regular supervision and Review of treatment^{3,4,5}. The World Health Organization (WHO) endorses an Adverse Drug Reaction is an "any response to a drug that is noxious and unintended, and that occurs at doses used in man for prevention, diagnosis, or therapy" And it may also acquire by the numerous health care practitioners or Physicians^{6,7}. Many predisposing factors are involved for the occurrence of adverse drug reactions to the patient. There are mainly six predisposing factors are Polypharmacy, Multiple and intermittent diseases, Drug characteristics, Age, Gender, Race and genetic factors⁸. In INDIA, utilize the "Suspected adverse drug reaction Reporting Form" to report any ADR. **Reporting of ADR** for health care professionals and consumers SUSAR now available on website of IPC to report ADR. Procedure includes A reporter can send filled ADR reporting form directly to NCC (**National Coordination Center**) or their nearest **AMC(ADR Monitoring Center)**. These reports are confirmed by health care professionals and entered into "**vigiflow**" and Send to NCC for further assessment. Finally reports are reviewed at NCC and committed to WHO Uppsala Monitoring Center. The obtained information is entered in the Drug Safety Data Base and analyzed and assessed by experts to identify new signals^{9,10,11,12}. Drug Interaction is defined as an interaction is said to happen when the outcome of one drug are changed by the existence of another drug, herbal medicine, food, drink or by some ecological chemical agent¹³. Mechanisms associated with Drug Interaction are Pharmaceutical interaction, Pharmacokinetic interaction, Pharmacodynamic interaction. The role of pharmacist includes Monitoring patients who are at greater risk of developing ADRs, who are prescribed with drugs highly likely to cause ADRs and minimize drug interactions by avoiding polypharmacy in Susceptible patients.

A Study on identification of risk factors in developing Poly Cystic Ovarian Syndrome among teenagers and minimizing them by Life Style Modifications through Advanced Patient Counselling by Doctor of Pharmacy

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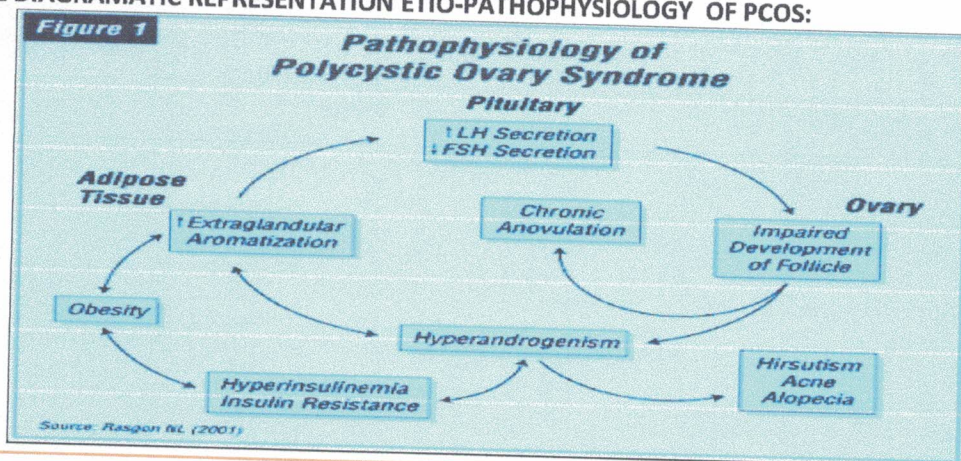
ABSTRACT

Poly-Cystic Ovary Syndrome (PCOS) is characterized by multiple small ovarian cysts, obesity, hypertension, diabetes, insulin resistance, and Hirsutism. The Study Aims to assess the role of Doctor Of Pharmacy in identification of risk factors in developing poly cystic ovarian syndrome among teenagers and minimizing them by life style modifications through advanced Patient counseling. The Main Objective of the present study is to prevent the following: To prevent the complications of PCOS who are suffering with PCOS in early of their age. To prevent the occurrence of PCOS to early females who are nearer for its occurrence. To minimize the symptoms and to improve the quality of life of females suffering with PCOS. Study Design: It is a observational and interventional study. Study Period: The Present study was conducted for a period of 6 months from January 2nd 2017 to July 31st 2017. Study site : The Present study was conducted in BAHUDHA WOMENS HOSTEL affiliated to Annamacharya college of Pharmacy, Rajampet, Kadapa, Andhra Pradesh, India. In The Present Study Out of total 600 women 530 enrolled to participate in the present study. After the collection of information by PCOS self assessment forms the scoring is given as 271 with scoring > 5 with percentile 51.1320 are with Chance for getting PCOS, 159 with scoring > 10 with percentile 30.01 are with high Chance for getting PCOS, 100 with scoring < 5 with percentile 18.8679 are Unpredictable to PCOS. The present study concludes that Doctor Of Pharmacy is very helpful in assessing the risk factors responsible in developing PCOS and also minimizing them by life style modifications through advanced patient counseling.

INTRODUCTION

DEFINITION: Poly-Cystic Ovary Syndrome (PCOS) is characterized by multiple small ovarian cysts, obesity, hypertension, diabetes, insulin resistance, and Hirsutism.

SEQUENTIAL DIAGRAMATIC REPRESENTATION ETIO-PATHOPHYSIOLOGY OF PCOS:



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ASSESSMENT OF SYMPTOMS AND QUALITY OF LIFE AMONG POST- MENOPAUSAL WOMEN IN RURAL AND URBAN ANANTAPURAMU

Dr. V Sreedhar, Dr. P. Ramakrishna Reddy, Dr. L Reddenna*, G. Nagendra Prasad, B. Nishkala, P.N. Mounika, Shaguftha

Introduction: Menopause is a biological event characterized by complexity of factors. On an average one third of the women's life consists of the post menopause years, and health care programmes for women do not address concerns beyond reproductive ages. This study aims to assess the symptoms and quality of life among post-menopausal women in urban vs rural Ananthapuramu.

Method: This is a community based cross-sectional study in Ananthapuramu rural and urban using a multi stage stratified random sampling strategy. Structured interview schedule was used for data collection and analysis was done using different statistics.

Results & discussion: A total of 400 participants were included in the study. The present study findings show that the maximum quality of life score among post-menopausal woman was 22000. The quality-of-life score among postmenopausal women in urban area was 10995 the total score for rural area is 11,000 which is slightly higher than the urban area which indicates that the quality of life of postmenopausal women of rural area were found to be distressing than that of urban area.

Conclusion: The severity of symptoms was found more in urban women. The QOL in rural population where the symptoms experienced were less severe was average and better than the QOL in urban women having severe menopause symptoms and there is a need to address the menopause problem of post menopause women and establish health care centres for them.

Key words: Menopause, Menopause symptoms; Post-menopausal woman; Quality of life; reproductive ages; Rural; Urban

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ASSESSMENT OF SYMPTOMS AND QUALITY OF LIFE AMONG POST-MENOPAUSAL WOMEN IN RURAL AND URBAN ANANTAPURAMU

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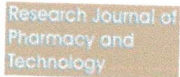
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Cytotoxic and Antiradical Activities of Extracts of *Rhizopora apiculata* (L)

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Abstract

The petroleum ether and methanol crude extracts of *Rhizopora apiculata* (L) (Rhizoporaceae) were screened for cytotoxicity by MT bioassay and antioxidant activity using three different methods. The active constituents of the plant *Rhizopora apiculata* (L) were extracted using petroleum ether and methanol. Both extracts were tested for cytotoxicity by MTT assay at a concentration range of 18.75, 37.5, 100, 150 and 300µg/ml. The percentage cell viability shown in Pet ether extract for human cervical adenocarcinoma cell lines (HeLa), human osteosarcoma cell lines (MG 63) and Breast adenocarcinoma (MC 67) were in the range of 102-91%, 100-84% and 101-78% respectively shows that pet ether extract does not have considerable cytotoxic activity. On the other hand, Petroleum ether and methanol crude extracts of *Rhizopora apiculata* (L) showed mild antioxidant activity with compared to ascorbic acid.

Keywords

Rhizopora apiculata, Breast adenocarcinoma, Human osteosarcoma cell lines Ascorbic acid.

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