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Medication Adherence, Side Effects and Patient-Physician Interaction in Hypertension

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Abstract: **Background: Hypertension is a destroying incessant disease which has influenced patients from all aspects of the world and is rank third as a cause of disability adjusted life years.**
Objective: The primary objective of the current study is to examine the adherence to medications in patients undergoing hypertensive treatment and the adverse effect of that and the patients relationship with his/her physician.
Method: We conducted a systemic review study that performed through Comprehensive literature search was performed in MEDLINE/PubMed and Cochrane Central Register of Controlled covering the time period from 1990 to July 2016
Conclusion: Adherence to prescribed medication is an imperative apparatus that can build treatment to be more viability, however literature has demonstrated that the rate of adherence in chronic diseases like hypertension is low and in this manner it is a critical issue in the treatment of diseases which require long-term plane of treatment.

Keywords: **Medication Adherence, Hypertension, MEDLINE/PubMed.**

1. INTRODUCTION

Medication adherence is generally defined as the behavior to which patient takes medication as recommended by the doctor [(1)]. Adherence relies on upon numerous factors as its predominance has been appeared by numerous trails in range from 0% to 100% respectively [(2,3)]. Non-adherence to prescribed medications has been a worldwide issue as studies have demonstrated that it has influenced the most in patients with chronic disease such as diabetes and hypertension [(4,5)]. It is therefore an important issue which is directly linked with the management of chronic diseases as it has been established that the non-adherence to prescription brings down the treatment viability [(6)]. All partners in healthcare insurance framework concern the issue of non-adherence the most because of the lack of healthcare services asset. The predominance of non-adherence is influenced by the choice of medication, utilization of corresponding prescriptions, and decency of medication and duration of drug treatment, which concludes from the analysis of multiple patient populations [(7)].

Hypertension is a destroying incessant disease which has influenced patients from all aspects of the world and is rank third as a cause of disability adjusted life years [(8)]. According to Joint National Committee VII there are more than 1 billion hypertensive patients world-wide [(9)]. And seems to be even more prevalent in some developing countries [(10,11)]. Many of hypertension risk factors may actually be changed by intervention. The benefits of treating high blood pressure are among the well-documented in medicine and doing so with drugs has been shown to reduce the risk of stroke by 40% and the risk of myocardial infarction by 15% [(12)]. The baseline treatment of hypertension consists in applying life-style measures where these are relevant, by reducing weight, excessive alcohol consumption and salt intake, by stopping smoking and by increasing physical activity [(13)]. Most patients with hypertension, however, end up getting prescribed drug therapy for their condition

Drug non-adherence among hypertensive patients prompts extreme results as it contribute in poor controlled blood pressure, which builds the likelihood of cardiovascular (CV) problems [(14)]. Beta blockers and lipid lowering agents are most commonly prescribed drugs in hypertensive patient and it has been accounted for that low adherence to these medication build huge risk of death in hypertensive patients [(15)]. However in the same study it has also been noted that the

adherence rate of less than 75% with short acting anti-hypertensive drugs such as captopril and quinapril increases the risk of CV problems [15].

A lot of hypertension care consideration happens in yearly checkup gatherings patients with thier doctors. In perspective of what was expressed above about solution non-adherence being a prime purpose behind poor blood pressure control, attempting to enhance adherence is ostensibly one of the fundamental elements of doctors in these appointment. Here, doctors are confronted with. with the complex attempting to comprehend the blood pressure values, suspected side effects and other factors relevant to the treatment decision, while at the same time trying to inspire patients to follow their advice.

The primary objective of the current study is to examine the adherence to medications in patients undergoing hypertensive treatment and the adverse effect of that and the patients relationship with his/her physician.

2. OBJECTIVES

Incidence of hypertension increased lately between the elderly population and their poor adherence to prescribed medications is a major cause for their treatment failure. the aim of this study as we conducted a systemic review is to assess adherence to medications in patients undergoing hypertensive treatment and the adverse effect of that and the patients relationship with his/her physician. Many researchers have tried to explore the complex relationship of medication adherence and its responsible factors. Therefore in contrast we would like to assess the reasons of why patients suffering from hypertension are taking or (not taking) their medication as it was prescribed for them, and what are the roles of physician in these cases.

3. METHODOLOGY

We conducted a systemic review study that performed through Comprehensive literature search was performed in MEDLINE/PubMed and Cochrane Central Register of Controlled covering the time period from 1990 to July 2016, with no limiting to any language publications. The search focused on articles that examined to medication adherence, its side effects and patient-physician interaction among patients suffer hypertension, including articles that described following terms medication adherence and those articles that examined the “relationship” between hypertension patient and medical doctors. Our search terms included “Adherence, barriers, hypertension, patients-physican interaction”.

4. RESULTS

Six previous trails have found that adherence to treatment for high blood pressure is influenced by a number of factors, some of which are modifiable [16-21]. As in other several three studies adherence rates have been shown to be associated with age, gender and race. Several studies of what we have included in our review have noted demographic disparities regarding medication adherence with lower adherence reported among younger individuals, men, and black persons [22,23,24]. However in other studies also more factors reported to negatively impact adherence to prescribed therapies include depression, lack of knowledge regarding hypertension and its treatment, complexity of medication regime, health care system perceptions by the patient, sexual dysfunction, side effects of medication and poor quality of life [25-31]. Among causes that have been suggested for patients’ non-adherence to medical treatment for hypertension in two more studies are side effects, poor memory, cognitive impairment, inability to pay for the drugs, complexity of treatments, poor instructions, lack of understanding of the illness, poor provider-patient relationship, and patients’ disagreement with the need for treatment [32,1].

In addition, the previous stated study [26] which also showed (about 20% of patients acknowledging diagnoses of high blood pressure were not taking medications as prescribed. The same study stated reasons for non-adherence that were recorded as forgetfulness (46%), blood pressure under control (40%), did not like taking medications (33%), adverse effect (30%), blood pressure controlled other ways (28%), and cost (16%) [26]. In another study, a similar finding was reported: hypertensive patients had poorer awareness of normal blood pressure values than normotensive participants [33]. In a general study of over 600 adults taking prescribed medications for hypertension, 80% reported having reservations about their therapy with 66% indicating they preferred to lower their blood pressure without taking blood pressure pills [34]. Another study found that hypertensive African American patients with controlled blood pressure reported higher mean self-efficacy scores compared to patients with uncontrolled hypertension [35].

Umair Khan et al 2014, [36] Recently conducted a prospective cross-sectional study among 200 patients attended National Health Service (NHS) Hospital, Sunderland, to evaluate the extent and reasons of non-adherence to medication. The overall adherence rate was found to be 79% (n = 158), however only 36% (n = 72) of participants were fully adhering to the prescribed medications. Using Morisky's medication adherence scale the results showed that women were higher in numbers but their adherence rate was low was compared to their male counterparts as only 74.7% (n = 92) females were complying with the physicians order, of which those of fully adhere to the medicines were only 34.1% (n = 42). Conversely, the rate of adherence among males were high (85.7%, n = 66) although those of completely adhere to antihypertensive medicines were moderate in numbers (39%, n = 30) as shown in Table 1 [36]. Moreover, when medication adherence was linked with age groups of participants it was revealed that majority of participants aged between 30 and 40 and this class of age also possesses the higher rate of adherence (82%, n = 64). The least adhered age group was 18-30 (73.4%, 38). Interestingly, it was noted that participant who showed 100% adherence were mainly the oldest ones (i.e. 50-60 years) [36].

Table1: Estimation of Morisky's medication adherence scale by participants' gender [36]

Adherence level %	Male (%)	Female (%)	Total (%)
0	1 (1.2)	4 (3.2)	5 (2.5)
25	2 (2.5)	6 (4.8)	8 (4)
50	8 (10.3)	21 (17)	29 (14.5)
75	36 (46.7)	50 (40.6)	86 (43)
100	30 (39)	42 (34.1)	72 (36)
Total	77	123	200
Adherent patients	66 (85.7)	92 (74.7)	158 (79)

concerning pateint physican interaction in case of hypertension and its effect on medication adherence, a study mentioned previously which was conducted by Osterberg [1] et al,2005 stated that Physicians are, considered to be poor at recognizing nonadherence in the clinical situations such adherence in follow-up appointments . This may be due to the fact that the complexity is overwhelming, and that things spoken about must necessarily be restricted to keep the consultation within its time frame of 15 minutes [1].

5. CONCLUSION

Adherence to prescribed medication is an imperative apparatus that can build treatment to be more viability, however literature has demonstrated that the rate of adherence in chronic diseases like hypertension is low and in this manner it is a critical issue in the treatment of diseases which require long-term plane of treatment. Some of the interesting findings in the some studies indicated that knowledge of hypertension, patient satisfaction and coping skills were significantly associated with medication adherence. This infers the requirement for patient training to build learning with respect to hypertension treatment and for compelling correspondence between the doctor and patients to enhance understanding in regards to hypertension and its treatment.

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