A REVIEW ON DIFFERENT ASPECTS OF MEDICATION ADHERENCE AMONG HYPERTENSIVE CONDITIONS

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ABSTRACT
Hypertension is a very common chronic disease in today’s world. Untreated hypertension increases the risk of morbidity and mortality due to cardiovascular, cerebrovascular, or renal diseases. Successful treatment of hypertension is important in reducing morbidity and mortality. Medication adherence is an important factor in achieving blood pressure control. There are several factors that can influence medication adherence. A poor adherence has negative effect on blood pressure control. A multidisciplinary approach should be implemented to promote better adherence to whatever medication regimen is prescribed. Clinical Pharmacist has great role improving medication adherence. This review article detailed about different aspects of medication adherence and role of clinical pharmacist in the same.

KEYWORDS: Hypertension, Medication adherence.

INTRODUCTION
Hypertension is defined as having persistent, elevated systolic blood pressure (140mm Hg or above) and/or diastolic blood pressure (90 mm Hg or above).[1] Untreated treated hypertension leads to increased risk of morbidity and mortality due to cardiovascular, cerebrovascular, or renal diseases.[2] The success of the treatment depends on Physicians’ role in making proper treatment choices and optimizing doses of medicines prescribed. Patient adherence to prescribed antihypertensive medication is also an important factor in achieving blood pressure goal. To achieve the treatment target there should be coordination between the health professionals and patients to achieve the treatment target.[3] Medication adherence is defined as “the extent to which the medication-taking behavior of a patient corresponds with agreed recommendations from a health care provider”.[4] It is a very important factor in achieving blood pressure control. Patients that were adherent to their hypertension treatment were often significantly less likely to have elevated blood pressures.[5][6] In chronic conditions such as hypertension, poor adherence to medications leads to poor health outcomes and huge medical cost on drug-related morbidity.[7] The methods for measuring medication adherence are direct and indirect methods. Indirect method, measure the concentrations of a drug or its metabolite in blood or urine. It is achieved by the use of a biologic marker added to the drug formulation. These approaches are expensive and burden to the health care provider. The indirect methods include, asking the patients about how they take prescribed medication, assessing clinical response, performing pill counts, ascertaining the rates of refilling prescriptions, collecting patient details by questionnaires, using electronic medication monitors, measuring physiologic markers, keeping a patient medication diary. These methods will help the healthcare provider for estimating the medication adherence indirectly without pain.[8] There are several self-reporting questionnaires have been developed to measure patients’ adherence to prescribed medicines. Among Morisky Medication Adherence Scale is most frequently used medication adherence questionnaire.[9] Another self-reporting tool is Hill-Bone Compliance to Blood Pressure Therapy Scale, contains 14 questions, including eight that assess medication-taking behaviors in hypertensive patients. High reliability and validity has been reported for these two tools of adherence measurement.[10] The factors that affect patients’ adherence include, demographic characteristics, severity of disease, complexity of the drug regimen (number of drugs and daily doses prescribed), drug classes (due to tolerability and side effects of medication), patients’ forgetfulness and lack of understanding of the nature of disease.[11]

Adherence to Hypertension Treatment
Hypertension is a chronic disease, therefore; patients are expected to take their medications for life long. Drug treatment of hypertension needs patient compliance with
Factors Influencing Medication Adherence

Non-adherence to pharmacological therapy, especially in patients with chronic health conditions, is a growing concern worldwide, which constitutes a major barrier to safe, cost-effective and effective use of drugs. Various factors that affect medication adherence include, poor provider-patient communication, lack of knowledge about a drug and its use, fear of adverse effects of the drug, long term drug regimens, complex regimens that require numerous medications with varying dosing schedules, cost and access barriers. It has also been observed that patient non-adherence varies between and within individuals, as well as across time, recommended behaviors and diseases. Adherence to drug therapy varies with patient age and knowledge about the disease. In children, adherence to drug therapy is depend on an adult caregiver. Non adherence to the treatment occur when the medication regimen is complex it could include improper timing of drug administration, or administration of numerous medications at frequent times during the day. These behavioral factors of patient results in a decreased therapeutic outcome. Most common reason of deviations from the prescribed treatment regimen is omitted of doses (rather than additions) or delays in the timing of doses. Patients most often become non-compliant for chronic diseases, like hypertension, where they do not have any unpleasant symptoms even without strict compliance to medication regimen. Estimates of medication non-adherence illustrate that the non-adherence percentage is greatest when the patients are symptom free. A Patient’s ability to read and understand medication instructions is one of the major factors that influences adherence. Patients with low literacy may have difficulty understanding instructions; this lead to decreased adherence and poor medication management. Gender, age, knowledge about the disease and medication, personality, and cultural factors influence adherence. For instance, women may be better at adherence to their medication regimens than men. On the contrary, some various studies show that common demographic factors such as age, marital status, gender, race, income, occupation, number of dependents, intelligence, level of education or type of personality have been great role in medication adherence.

Methods to Improve Medication Adherence

There are different methods are involved to improve the medication adherence. They are,

1) Level of prescribing
   - Introduce a collaborative approach with the patient at the level of prescribing
   - Simplify medication taking regimen.

2) Communicating with the patient
   - Inform the common side effects of the medicine.
   - Use medication adherence improving aids like, medication calendars or schedules that specify the time to take medications, drug cards, medication charts or medicine related information sheets or specific packaging’s such as pill boxes and special containers indicating the time of dosing.
   - Provide behavioral support.
   - Collaborate the patient medication regimen into his/her daily regimen.

3) During follow ups
   - Schedule appropriate follow up. Monitoring the medication adherence should also be a criteria while scheduling patient follow up.
   - Check medication adherence during follow up. Measure adherence by various methods which may be dependent on the patient as well as drug characteristics. Check the effectiveness of medication adherence aids used, if any. This should be done by physicians as well as pharmacists.
   - Find out difficulties and barriers related to adherence

Patient-health care professional, especially patient-physician or patient-pharmacist communication is central to optimizing patient adherence.

Methods to Measure Medication Adherence

Direct and indirect methods are two methods to measure the medication adherence. Direct methods include, measurement of level of a drug or its metabolite in blood or urine. It is determined by adding a biological marker to the drug formulation. Direct approaches are one of the most accurate methods of measuring adherence. Indirect methods include, various patient questionnaires, patient self-reports, pill counts, rates of prescription refills, assessment of the patient’s clinical response, electronic medication monitors, measurement of physiologic markers, as well as patient diaries. Each method has its own advantages and disadvantages. Among the various methods, questioning the patient,
Pharmacist Role In Improving Medication Adherence Among Hypertensive Patients

The role of the clinical pharmacist in improving medication adherence is very important, the pharmacists—through counselling, medication therapy management, disease-state management, and other means—can play a pivotal role in patient care. It include,

- Provide information to hypertensive patients about the disease condition and the medication.
- Identifying the risk factors in each individuals and talking with them about lifestyle modifications to lower BP.
- Educating patients on the importance of multiple medication may be needed, how they work together and why adherence to their therapies is so important; and, providing self-monitoring equipment to patients with hypertension and teaching them how to use them properly.
- Giving the information to hypertensive patients that, how each drug lowers blood pressure.
- Provide patient’s compliance aids like patient information leaflets etc, to assist them in adhering to their therapy.
- Talking with patients about refilling about anti-hypertensive drugs in pharmacies.
- Advising patients to carry a personal medication record (PMR) and develop a relationship with their pharmacist to help with medication therapy adherence.
- Working closely with patients and their physicians when patients require medication therapy changes.
- Reminding patients to take their medication every day as prescribed.
- Cautioning patients to see how they react to therapy before they drive, use machinery, or engage in other tasks requiring alertness.
- Talk to their physician if they experience any type of side effects or symptoms get worse.[33]

CONCLUSION

In hypertensive patients, medication adherence is very important in achieving blood pressure control. The adherence to the therapy reduces the complication associated with the hypertension. Direct and indirect methods are two methods to measure the medication adherence. There are number of factors that influences medication adherence they are, patient related, provider based and factors that are related to the health care system. The better communication between the pharmacist and patient improve the medication adherence. The pharmacist has great role in improving medication adherence and to achieve the target goal.

REFERENCE


