Editorial

Importance of adherence to medical treatment

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Non-adherence to medical treatment is the core issue of pharmionics; the study of what patients do with prescribed medications. Non-adherence refers to unfilled prescriptions, incorrect dosing intervals, skipped dosages or premature cessation of medication.[1] Reports of non-adherence are in the range of 20-80%, with an estimated average of 50%.[2] In dermatology, the rate of adherence is lower for topical medication.[3] Non-adherence is the most common cause of non-response to treatment which is interpreted as treatment or drug failure; it may also affect the psychological well-being of a patient.[4] Failure of medical treatment may lead the clinician to decide on alternate therapies or a change in dose schedule. This may in turn lead to the elimination of the use of potentially effective medications, or may expose the patient to risks of adverse effect of drugs. The patient on the other hand, may turn to other clinicians for cure. This results in an increase of disease related medical costs. The annual cost of non-adherence was estimated to be at 100 million US dollars in 1993 or 70% of healthcare expenditure on drugs.[1] In Pakistan as there is no health insurance, most of the burden falls on the patients and their family.

Most cases of non-adherence are associated with chronic diseases, asymptomatic disease, complex treatment regimens, problems at home, alcoholism, disability and mental illness. Adherence to treatment is associated with acute and life threatening diseases. Trust in a physician is the most important factor in adherence to medication. The most common reason given by patients for failure of compliance is being fed up, forgetful or too busy. In a study it was found that being married, older, employed, not smoking or drinking were associated with higher compliance.[5]

Hypertension is a silent killer. A study showed that about sixty million people in the United States have hypertension but more than 50% dropped out of therapy during the first year of treatment. Of the remaining patients nearly one third did not take enough of their prescribed medication to adequately control their blood pressure. Less than 30-50% of hypertensive patients receiving treatment had blood pressure under effective control.[6] Neglecting medication intake or incomplete dosing may lead to the development of drug resistance, and rejection of a transplanted organ. A study reported that non-adherence accounts for 13% of graft loss in one year which increases to 27.6% of graft loss, 2-3 years after transplantation.[7] In another survey it was observed that 125,000 deaths and several hundred thousand hospitalizations per year are caused by noncompliance problems amongst patients with cardiovascular diseases.[6]

In dermatology non-adherence to topical medication is a problem. This is because of the inexactness of dose and application of the drug prescribed. It is often said to apply sparingly or liberally, on a damp or dry skin, before or after sun exposure etc. This often results in patients either emptying the tube in a week or having hardly used the medicine. Then there is a problem in applying the medicine on the back and inaccessible parts of the body, problems of application which a patient may have due to arthritis etc. The complexity of some regimens such as psoriasis is another problem for non-adherence to therapy. Dermatologists should take time in explaining the amount of ointment/ cream to be applied by using the 'finger tip' method or whatever method they think appropriate, instead of giving vague statements; and take time to discuss the method of application of therapy.

The other problem faced by dermatologists is the 'steroid phobia'. This is more common in the west because of the awareness of side effects of the drug. Atopic dermatitis which is a common form of childhood eczema, has most cases of non-adherence due to the corticosteroid phobia.[1] The patients also do not use emollients when the disease is silent. Non-adherence is a common problem in acne. Irritation with initial use, time taken for the medication to act and the complexity of treatment regimen such as photo-protection, often results in premature cessation of therapy.[8] It is estimated that >75% of skin cancers could be prevented by regular use of sunscreens during the first 20 years of life. Despite public health efforts, adherence to sunscreen use remains suboptimal in all age groups.[1]

There are a number of ways of detecting non-adherence to medication. Some of the indirect methods are self-reporting by the patient, interviews, therapeutic outcome, and pill count etc.[1,3,6,7] Computerized compliance monitors are the most recent and reliable of the indirect detection methods.[6] The system consists of a microprocessor housed in the cap of the medicine container. Each time the patient removes the cap of the container, the

time and date are recorded. Data can then be retrieved by connecting the microprocessor unit to a computer. The data not only provides an indication of individual dosing pattern, but allows correlations with clinical events.[6] The direct measures include the biological markers , tracer compounds and biological assay of body fluids. The direct measures are more reliable but cannot be used in routine practice.

The important issue is how to deal with non-adherence. The pharmaceutical industry has tried to overcome the problem of lack of adherence by a number of ways: such as packaging of pills for oral contraceptives, corticosteroids, nitrofurantoin, and methotrexate. A special cap has been designed for ophthalmic solutions of some medicines e.g. levobunolol. These are designed to help people remember how many times they have to instil the drops each day. CompuMed is a dispensing device that uses cassettes in which the appropriate medications are placed, it reminds patents to take medications and documents the time and date when medications are taken.[6] New dosage forms of certain drugs are also developed to help patients compliance e.g. development of longer acting, extended release dosage forms of calcium channel blocking agents.[6]

Methods to improve compliance to medication include health education to increase retention of the regimen, self-monitoring of medication habits, tailoring medication taking to other daily habits and treatment contracts.[9] The most significant finding for medical adherence was the information given to the patient by the doctors as opposed to the nurse practitioners, which increased the need and wisdom required by the patient to take the medication rather than terminating treatment.[10]

Hospitalized patients should start taking the medicines on their own before discharge, this would help the clinicians to recognize any problems that may arise due to non-compliance at home. Every speciality has its own method of increasing compliance such as the behaviourally oriented programme by Eckman et al for teaching management skills to patients with schizophrenia.[6] Similarly there are special programmes for people with hearing and visual impairment.

The most important strategy for improving compliance lies with the clinician. The health-care professionals are aware of the importance of non-compliance and should take necessary steps to improve adherence to medical treatment. The clinician should realize that so much money is spent in investigations and diagnosis of an illness; the goal to achieve good health will not be reached if the patient does not take the medication prescribed. This has to be individualized depending upon a number of factors such as the patients temperament, the disease, supports at home, complexity of treatment etc. Patient education is a cornerstone in achieving compliance; and a good patient-physician relationship is vital to achieve adherence to medication.

The general excuse that physicians are too busy to give time to the patient regarding drug therapy cannot be accepted. The treatment failure due to non-compliance is high, it is true that patients are decision making individuals, but a lot of this decision making depends upon the physician-patient relationship. Physicians must take time to make this relationship strong, not for monitory reasons but for improving adherence to medical treatment. Moreover it will also improve their ratings as a successful medical practitioner.

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