

MAINTAINING COMPLIANCE IN GLAUCOMA PATIENTS

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The problem is especially critical for eye doctors who manage patients with glaucoma, because the nature of this particular disease encourages non-compliance. Patients are usually asymptomatic in the early, moderate and sometimes even advanced stages of their disease, they do not get better and they may get worse, despite the best efforts of the clinician. Patients expect some benefit from medication, either in the form of improved vision or comfort, but rarely achieve it.

Defining the problem, compliance is defined as the degree to which patients adhere to their doctor's advice. Non-compliance lies along a spectrum of increasing deviation from the intended treatment plan. Some think that one missed dose per month is technically noncompliance, and others give patients the freedom to make a few mistakes and reserve their term for regular offenders.

The exact magnitude of non-compliance in glaucoma probably lies somewhere between 25% and 50%. An interesting finding is that patients with more advanced ocular damage actually showed greater compliance, perhaps because the severity of their condition had been impressed on them more than the average patient.

THE FORMS OF NON-COMPLIANCE MAY HAVE AT LEAST FIVE DIFFERENT FORMS:

Failure to take medication as often as prescribed

1.- Including missing doses, cessation of treatment and the inability to get the drop into the eye.

2.- Improper dose Timing:

Because patients are not aware of the duration of action of their medication and instill drops when it is most convenient for them, based on their lifestyle. The problem dosage timing has to be flexible and tying installations to daily activities, such as prayer times, meals, brushing teeth, waking up and going to bed.

3.- Excessive use of medication

often occurs because patients are not explicitly told to take a single drop and they adopt the 'more is better' strategy.

4.- **Taking the medication for the wrong reason**

When using more glaucoma medications to treat their red, itchy eyes or using a previously purchased bottle of astringent or antibiotic to treat their glaucoma before obtaining their next glaucoma prescription.

5.- **Purchasing prescriptions**

A certain percentage of patients never get the initial prescription because of the cost or the lack of perceived need to take it. Others do not make the effort to renew it until the bottle is empty.

ALL METHODS IN DETECTING NON-COMPLIANCE

Are not ideal in the accuracy, practicality or objectivity. Patients may also try to avoid detection by taking drops just before an office visit.

The most common techniques for detecting non-compliance are:

- Patient interview
- Clinical outcome
- Calculation of number of bottles used per month.

Patient Interview

Although not always reliable, the patient interview is probably the most practical method for assessing compliance in the clinic setting. Open ended questions rather than statements are helpful like: "How are you using your drops?" – may be a more useful question than "Are you still taking your yellow top drops twice a day?" There are major differences between patient accounts of how medication was used and direct observation of actual instillation. This finding emphasizes the value of watching patients instill the drops.

Clinical Outcome

And monitoring clinical results, both objectively and subjectively, is probably the best way to detect non-compliance. This involves careful evaluation of the optic nerve, visual field changes and intraocular pressure (IOP) from visit to visit. Determining glaucoma control with IOP readings alone can be misleading, because some patients may only take the medications on the day of the doctor's visit. If the IOP is at or below the desired target pressure, yet progression of cupping or field defects are noted, poor compliance may be the cause.

Calculation of Number of Bottles and Prescriptions used per month

A study in this respect revealed that the average patient was without therapy for 112 days of the year.

REASONS FOR NON-COMPLIANCE

almost always exist and it is the doctor's duty to make earnest effort to ascertain and address those issues.

Side Effects of glaucoma medication, of which the most common being bitter taste, stinging and redness. Dry eye patients who experience symptoms before glaucoma therapy may notice an exacerbation of symptoms once glaucoma drops are added. These effects, when combined with the absence of any observable benefit, may discourage patients from complying. The patient should be taught that vision loss from glaucoma is never regained and the purpose of the medication is to preserve the remaining vision. The doctor should also warn the patient of potential ocular and systemic symptoms from the medications. Patients should be encouraged to report side effects immediately so that medications can be adjusted in a timely manner.

Cost can be a major factor in patient non-compliance. Drop size and numbers of drops per bottle, which determine how long a bottle lasts, and an open discussion with patients about the cost of medications is important so that they can be made aware of these costs. General questions, such as "Are you able to get your medicine? I know the drops are fairly expensive," or "If I prescribed a less expensive medication, would that help?" can lead to the discovery that the patient is having problems affording drugs.

Frequency of Instillation may also have an impact on compliance. Although it might make the intuitive sense those compliance decreases when the dosage is increased, only marginally improved compliance was found in patients on b.i.d. medication versus q.i.d. However, patients are less likely to miss both instillations of a b.i.d. medication than the single instillation of qid drugs. Thus patients on a qid drug miss a full day of medication if they miss a single dose.

Lack of understanding, especially in poor patients, has a negative impact on compliance and is, to some extent, under the control of the doctor. Patients may not comprehend the severity of the disease. They need to be told that the medication they are taking reduces eye pressure to avoid loss of peripheral vision, and that just because they see well does not mean that their disease is under control.

Polypharmacy, especially in patients with multiple medical conditions who tend to be less compliant. Polypharmacy as it is sometimes called, can lead to deletion of medication that patients think are less important. For example, if given a choice between affording or remembering to take a heart medication or an eye drop, the patient may logically choose the heart medication. The practitioner can talk with the patient about where glaucoma should be on their priority list of conditions, and why.

Miscellaneous Factors have been implicated as reasons of non-compliance are increasing; age, gender (male patients have been shown to be less compliant), race, increased time in the waiting room and having to follow up schedules that do not correlate well with patients' personal schemes. Patients who dislike their physicians also tend to be less compliant. It is essential to keep the lines of communication open, gain each patient's trust and be willing to bring up the subject of compliance in an open and compassionate manner.

INCREASING COMPLIANCE: IS THE PHYSICIAN'S DUTY

The most important factor affecting compliance is the time that doctor and staff spend in educating patients. This may seem obvious, but many doctors merely tell patients that they "see signs of glaucoma" and that the patient "will need to use drops twice a day". From that point on, any deviation from the intended treatment plan is viewed as

an annoyance or as the "patient's problem". With a little time, effort and a caring manner, the doctor can pro-actively improve compliance in many patients.

Ways to increase compliance include:

- 1- Proper handling of the initial office visit.
- 2- Initial and ongoing patient education.
- 3- Assessment of compliance.
- 4- Providing written instructions (large print when needed) and reminders.
- 5- Establishing a relationship with patients that inspires trust, responsibility and a willingness to compromise.

THE INITIAL OFFICE VISIT:

A CRUCIAL TIME FOR SETTING THE STAGE

For the complete manner in which the doctor handles the patient on the first visit may have a significant effect for the future success of treatment. The doctor must impress on the severity of glaucoma and the mechanism of the disease in a firm, but caring way. We may use visual aids to show a sequence of increasingly cupped optic nerves with corresponding visual field loss. A discussion on how the treatment prevents such loss by lowering the pressure should also be undertaken, with emphasis that the patient must be measured by the doctor, but will not feel lowered eye pressure.

It may also be useful to involve family members in this discussion whenever possible. We encourage family members to sit in during the examination, as well as during the final consultation, so that they understand the patient's condition and become involved in the patient's care from the outset, which can be helpful later in the treatment phase.

Once a drug is selected and possible adverse ocular and systemic side effects should be discussed. Discuss with them what to do if they accidentally forget a dosage, telling them to put a drop in as soon as they remember and then simply get back on the original schedule. It is better to have two prescriptions for the same medication; one for home and one for work, to increase convenience.

Drop Instillation

Technique should be taught on the first visit as well and followed up with additional training at future visits. Keeping drops refrigerated allows a positive feedback mechanism as the cold drop enters the eye. Teaching nasolacrimal occlusion using digital pressure at the time of instillation is also advocated. Patients using multiple drops should also be instructed to wait 5 minutes between instilling each one. Remember the importance of occasionally asking patients to demonstrate their instillation techniques.

It is very important to have a special form of prescription for glaucoma. The front surface includes a well organized medication-dosing schedule and on the back, well written information.

A Suggested Medication Dosing Schedule

Written instructions and drop schedules can be very valuable, especially as the complexity of therapeutic regimens increases as the following schedule.

Name.....

	<i>Left Eye</i>	<i>Right Eye</i>
Breakfast	1 drop of medication A (yellow cap)	1 drop of medication A (yellow cap)
Lunch		
Dinner	1 drop of medication A (yellow cap)	1 drop of medication A (yellow cap)
Bedtime	1 drop of medication B (clear cap)	1 drop of medication B (clear cap)

N.B. Mention the name of the A & B medication in Arabic.

The written translated information on the proper instillation of eye drops is beneficial to be registered on the back of prescriptions for all glaucoma patients as follows.

HOW TO USE YOUR EYE DROPS

- 1** - Wash your hands well with soap and water.
- 2** - Stand in front of a mirror.
- 3** - Using your forefinger and thumb, gently pull down your lower lid to form a pocket, or pull your lower lashes forward to create a pocket.
- 4** - Tilt your head back and look up.
- 5** - Place one drop in the pocket. Do not let the tip of the bottle touch your finger, eyelashes or other surfaces.
- 6** - Continue to hold your lower lid down a few seconds to let the drop settle.
- 7** - Close your eye and move your eyeball from side to side, for 2- 3 minutes.
- 8** - With closed eyes, gently apply pressure with your index finger to the inside corner of your eye. This puts pressure on the tear duct and helps keep the medication in contact with your eye.
- 9** - When taking more than one type of eye drops at the same time, wait at least 5 minutes before instilling the next drop.
- 10** - Do not run out of your eye medications. Re-purchase your prescription approximately one week before you expect to run out of your eye drops.
- 11**- Call the clinic with any questions or concerns with your eye medications or your glaucoma.

NON-COMPLIANT PATIENT

Some patients, despite our best efforts, do not comply with the medical regimen prescribed. These patients should be considered for laser or surgical treatment therapy. More studies are pointing to these techniques as first-line treatment when it appears that medications are not or cannot be used.

CONCLUSION

One of the greatest variables affecting compliance with glaucoma therapy is the doctor's interaction and communication with the patient. Glaucoma is a chronic disease that requires life long therapy and surveillance. We must educate our glaucoma patients and spend the extra time necessary to help our patients fully understand their disease. The more active a role we play in our patients' management, the greater the success in treating this chronic and potentially sight-threatening disease.