SLT: The First Drop

Shibal Bhartiya, MS
Clinical Research Fellow
Glaucoma sector, Ophthalmology Service,
Department of Clinical Neurosciences
Geneva University Hospitals, Switzerland

Financial Disclosures-Travel Grant: Alcon, Ellex
Research Grant: Merck
In the Ocular Hypertension Treatment Study, 40% of patients required more than two medications to achieve a 20% decrease in IOP\textsuperscript{18}. In the Collaborative Initial Glaucoma Treatment Study, 75% of patients with early-to-moderate glaucoma required more than two medications to control their IOP within 5 years\textsuperscript{19}. 
Options
Glaucoma Treatment: A Tight Rope Walk

Prevalence and incidence of glaucoma-induced blindness and visual impairment today are not very different from those of the last century.

Ophthalmic Epidemiol 2006;13:35-42.
Glaucoma Treatment: A Tight Rope Walk

- Efficacy
- Compliance
- Quality of Life
- Economics
Efficacy

• Primary SLT significantly increased the tonographic outflow facility and decreased IOP in patients with POAG and OHT

• The level of IOP reduction could not be explained by the increase in tonographic outflow facility alone.
• Success in IOP control: 75% with SLT, 73% with latanoprost
• Absolute reduction 6.2 mm Hg with SLT, 7.8 mm Hg with latanoprost
• Treatment with SLT successful in lowering IOP fluctuation in 50% of patients, latanoprost in 83%
Compliance

- Between 28% and 58% of glaucoma patients do not use their medications as prescribed
- Non compliance is probably 30%-40

Compliance

- Nonadherence between 23% and 60% over 12 months.
- Nonpersistence between 30% and 95% at 1 year.
- Higher adherence and persistence with prostaglandin analogs
- 50% discontinuing prostaglandin therapy failed to restart any other topical therapy

Conventional Treatment

- Number of years that people would have visual impairment (or blindness) would be reduced from 5.2 years to 1.0-2.6 years.
- These changes would cost between $28,000 and $46,000/ QALY Quality Adjusted Life Year

A change to initial laser trabeculoplasty followed by topical medication and then trabeculectomy was surprisingly cost-effective and was actually cost savings, returning $2.50 for every $1.00 spent.

Even if the cost of laser treatment increased 4-fold, it still returned $1.74 for each $1.00 spent.

Taylor HR, Crowston J, Keeffe J, et al.
www.cera.org.au
Increasing the number of diagnosed and treated people with glaucoma was quite expensive at $AU153,000–167,000/QALY and at this cost not very cost effective.

Price per mm of IOP

- Side effects
- Complications
- Quality of life
- Economics
Interventions involving simplified dosing regimes, reminder devices, education and individualised care planning, are known to show improvements in adherence.

Ophthalmology. 2009;116:2286-93
“From inability to let well alone; from too much zeal for the new and contempt for what is old; from putting knowledge before wisdom, science before art, and cleverness before common sense; from treating patients as cases, and from making the cure of the disease more grievous than the endurance of the same, Good Lord, deliver us.”