It has been more than five years since the Philippine Journal of Ophthalmology devoted an entire issue on neuro-ophthalmology, a subspecialty that is still considered minor in terms of research and clinical practice, with less than 10 active practitioners locally.\textsuperscript{1} That issue highlighted several neuro-ophthalmology papers submitted by local and international authors, as well as an editorial on optic neuritis and ethambutol-related toxic optic neuropathy (ETON). The following years saw members of the Neuro-ophthalmology Club of the Philippines (NOCP) focus on ETON in particular, a local “scourge” that is fraught with unique issues and controversies:

**ETON not clearly addressed in the nationwide fight against tuberculosis**

That we have a sound national TB program which has increased the country’s TB case-detection and treatment-success rates over the years is a given.\textsuperscript{2,3} What is particularly disturbing is that none of these programs clearly address the issue of ocular toxicity during treatment for TB. This should concern us. At the most modest estimate of 1\% incidence of ETON in the foreign literature, we should be seeing at least 2,500 cases of ETON yearly based on our national TB incidence. With several studies showing a much higher incidence of ETON in those undergoing TB treatment, one can easily do the math as to the actual numbers of cases we should be seeing annually.\textsuperscript{4,5} In fact, we still do not have the actual incidence of ETON locally; neither do we have official recommendatory guidelines on monitoring the vision of these patients under TB treatment.

**A dearth of warning from prescribing physicians**

Among local neuro-ophthalmologists with experience on ETON, the general consensus is that there is often a dearth of warning from prescribing physicians about the potential adverse ocular effects of anti-TB treatment. A local case series in 2005 of 19 patients diagnosed with ETON showed that 18 of these patients received NO warning at all from their prescribing physicians on the potential for visual impairment of anti-TB drugs.\textsuperscript{6} A random survey by Tamesis of 30 local physicians (internists, pulmonologists, family physicians) showed that while ALL 30 surveyed physicians followed the prescribed guidelines for TB treatment and were aware of ethambutol’s toxicity to the eye, not a single surveyed physician referred his patients to an ophthalmologist prior to treatment or warned them about the potential adverse ocular effects of TB treatment.\textsuperscript{7} Without a clear warning from the prescribing physician, the obvious consequences are delayed diagnosis and potential irreversible damage to the anterior visual system (as the patient continues the intake of ethambutol until a formal eye examination reveals the cause).

Another unfortunate consequence of this lack of warning is that it can lead to strained professional relationships, as the ophthalmologist is occasionally caught in the middle of 2 irate individuals: the patient (who is outraged by the lack of warning) and the prescribing physician (who may resent the ophthalmologist’s divulgence to the patient of the actual cause of his visual problems). It must be emphasized that part of our job is to protect the prescribing physician and avoid a potential medico-legal case.

**More local studies needed**

Few local studies on ETON have been published previously.\textsuperscript{6-11} This issue of the PJIO includes an excellent paper from Jose Reyes Memorial Medical Center.\textsuperscript{12} The study looked at the incidence of color-vision abnormalities among patients enrolled in various DOTS (directly observed treatment short-course) centers in Metro Manila using...
three different color vision tests: the Ishihara Pseudo-
isochromatic Plates, which is ubiquitous and is the color

test of choice in terms of availability and ease of use for

many local ophthalmologists, and the less commonly
available Farnsworth Panel D-15 and Lanthony D-15

Desaturated tests. In this study, the Lanthony D-15

appears to be the most sensitive test in detecting early

color-vision changes in ETON. This is consistent with

other studies. Should we then discard the Ishihara Plates

as our primary means to detect early ETON? Are these

findings consistent for all cases and stages of ETON? Does

it hold true even for severe cases of ETON? (which

accounts for the majority of cases we see locally). We

welcome more local studies like this looking into the

clinical profile of local ETON cases. The insights we can

glean from these local studies will definitely play an

important role in any future efforts to come up with

official recommendatory guidelines from the

Department of Health (DOH) on the proper monitoring

of Filipino patients undergoing TB treatment.

The Philippine National-Registry for Ethambutol-
related Toxic Optic Neuropathy (PNR-ETON)
Weblink Project

Over the past several years, the NOCP has taken the
lead in raising awareness on ETON within the
ophthalmic community. More importantly, this effort
is being extended to our colleagues OUTSIDE the
ophthalmic community, i.e., physicians who are actually
prescribing these drugs. However, we cannot convince
our colleagues without actual numbers. The PNR-ETON
web site (http://www.pnr-eton.com), the first of its kind
in the world, is a joint project of the NOCP, the
Philippine Academy of Ophthalmology (PAO), and the
Hope in Sight Foundation that aims to gather
nationwide data on ETON. Hopefully, with enough local
data at our disposal, we have better chances of
convincing everyone else outside our profession about
the dangers of ETON. Ultimately, these numbers will
be the basis for any official recommendatory guidelines
to be put out by the DOH and PAO in the future.

The PNR-ETON web site is basically a “primer” on
ETON. Ophthalmologists are encouraged to visit the
web site and learn more about this clinical condition
(including background, presentation, diagnosis,
monitoring, list of local studies, etc.) However, the main
highlight of the web site is the actual REGISTRY.
Ophthalmologists can report their cases via a one-page
online form or download the form and submit it by fax
or e-mail. At the very least, ophthalmologists can report
their cases via a short SMS to the NOCP. Clearly, we are
trying to make it easy for our colleagues to submit their
cases. Every Filipino EyeMD must realize that this
responsibility falls upon our specialty “by default,” and
that we cannot expect our non-ophthalmologist
colleagues to do it for us because WE, not they, are the
ones seeing the consequences of ETON. That many of
them are not aware of the unfortunate visual outcomes
in ETON cases can be traced back to us—because we
are not reporting back what we see in our clinics. And
if ophthalmologists will not take the lead in this effort
locally, who else will?

The members of the NOCP hope to step-up their
efforts along this project in the coming months through
more lectures and workshops on ETON. The short-term
goal is to gather ETON numbers locally, while the long-
term goal is to effect policy changes in the national TB
program based on the clinical insights we hope to glean
from this registry. The NOCP cannot do this alone. We
certainly need everybody’s help. It is our hope that
together, our noble profession can one day overcome
this local scourge that has caused considerable ocular
morbidity in our populace.

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### A. GENERAL INFORMATION

<table>
<thead>
<tr>
<th>1. EyeMD/ REPORTER Information</th>
<th>2. PATIENT Information</th>
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<tbody>
<tr>
<td>1a. Name</td>
<td>2a. Name</td>
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<tr>
<td>1b. Clinic Address</td>
<td>2b. Age</td>
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<tr>
<td>1c. Tel #</td>
<td>1d. Mobile #</td>
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<td>1e. Email</td>
<td>2c. Gender</td>
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<td>2e. Wt</td>
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<td>2f. City of Residence</td>
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</tbody>
</table>

### B. HISTORY/SYMPTOMATOLOGY/DRUG INFO

- **4. Past Ocular Hx (List all previous Dx, if any)**
  - 4a. OD
  - 4b. OS

- **5. Systemic Disease** *(special note: inquire about kidney disease/status)*

- **6. Concomitant Drug Intake (other than anti-TB)*

#### 7. Anti-TB REGIMEN 1:

<table>
<thead>
<tr>
<th>Component</th>
<th>Daily Dose in mg.</th>
<th>Start of Tx (mm/dd/yy)</th>
<th>End of Tx (mm/dd/yy)</th>
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<tbody>
<tr>
<td>Ethambutol (EMB)</td>
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<tr>
<td>Isoniazid (INH)</td>
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<td>Rifampicin (RIF)</td>
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<tr>
<td>Pyrazinamide (PZA)</td>
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Px Compliance (check one)
- GOOD
- FAIR
- POOR

#### 8. Anti-TB REGIMEN 2:

<table>
<thead>
<tr>
<th>Component</th>
<th>Daily Dose in mg.</th>
<th>Start of Tx (mm/dd/yy)</th>
<th>End of Tx (mm/dd/yy)</th>
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</table>

Px Compliance (check one)
- GOOD
- FAIR
- POOR

### C. EYE EXAMINATION

<table>
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<tr>
<th>OD</th>
<th>OS</th>
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</thead>
<tbody>
<tr>
<td>14. Best Corrected Distance Visual Acuity on 1st Consult</td>
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<tr>
<td>15. Visual Field Defect (central, ceco-central, generalized, bitemporal, etc)</td>
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</tr>
<tr>
<td>16. Color Vision (Ishihara Color Plates) out of ___ out of ___</td>
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<tr>
<td>17. Other Color Tests (please specify)</td>
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</tr>
<tr>
<td>18. Fundus Appearance (normal, optic disc pallor, cupping, retinopathy, etc)</td>
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<tr>
<td>19. Concomitant Eye Disease/Diagnosis (cataract, glaucoma, etc.)</td>
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</tr>
<tr>
<td>20. Relative Afferent Pupillary Defect (RAPD)—leave blank if none</td>
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</tbody>
</table>

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**Thank you for your contribution! Please submit the completed form by:**

**Fax:** 02-638-5837

**Mail:** American Eye Center, Level 5, Shangri-La Plaza Mall, EDSA cor Shaw Blvd, Ortigas Center, Mandaluyong City, Philippines 1554

**Email:** rich_kho@yahoo.com (rescan filled-out form)