

## **Dr. Graham Trope Feature Interview Profitable Practices Magazine, Spring 2013**

Dr. Trope is a man on a mission: To eradicate glaucoma in this country...

### **Dr. Trope, can you give us a brief summary of your educational and scientific backgrounds?**

I graduated from medical school in South Africa and continued my studies in the UK where I did my training in ophthalmology. I also obtained a PhD from Glasgow University. In 1984 I was offered a glaucoma position in Toronto by the then chairman Dr. Clive Mortimer. Ever since then I have run the glaucoma service at the University Health Network.

### **How did you become so interested in glaucoma?**

In the late 70s while I was an ophthalmologist in training I attended an exciting lecture. The speaker (the late Tom Zimmerman) was a well-known glaucoma specialist who had just introduced beta blockers for the treatment of glaucoma. I asked him how the drops actually worked and when he answered that 'we have no idea' I was hooked!

I became very interested in glaucoma and its pharmacology. We subsequently determined that the drops work by binding to certain structures in the eye called beta receptors.

### **Why did you found the Glaucoma Research Society of Canada?**

When I arrived in Canada I was very keen to do research into glaucoma but I soon found vision science to be poorly funded; in particular glaucoma research was very poorly funded. On the one hand I had a group of patients who were asking me when a cure would be found for this terrible disease and on the other hand we had governments minimally supporting vision research. So I decided to form an organization with one specific aim: To support research and through this to try find a cure for glaucoma. I initially established the Glaucoma Research Society of Ontario and then with the help of Mr. Michael Cleaner and many other wonderful volunteers we went on to develop the Glaucoma Research Society of Canada. Our head office is in the Canadian National Institute for the Blind (CNIB) building here in Toronto. From here we raise funds and distribute them to researchers across the country to try and find a cure. That's all we do.

With the money raised we give out research grants. We usually get anywhere from 9 to 15 applications for grants each year and we support the best ones. We have raised over \$3 million so far and have supported a significant number of research grants. We are very proud that about 66 per cent of the recipients go on to publish their results.

Our organization is very lean; we have only one part-time administrator so the funds

we receive are well used. We are most reliant on patients themselves for funding but the pharmaceutical industry have stepped up over the years to support us, particularly Pharmacia, Allergan and Merck. They have been terrific. But it's mainly the patients who support us. It is sad that we only have 1000 members since over 400,000 Canadians have glaucoma, so we desperately need more members. Anyone can join; all they need to do is contact the office at the CNIB office ([info@glaucomaresearch.ca](mailto:info@glaucomaresearch.ca)) and we will gladly send out the information. We are happy to take any donation, from \$1 to whatever level supporters can afford.

### **What is the latest research you are working on?**

We have recently completed a major study on a new surgical technique, which we are presenting at the forthcoming American Glaucoma Society meeting; we have recently completed another study on high risk patients for glaucoma. We also are continuing research on imaging and molecular biology in conjunction with Drs. Yvonne Buys and John Flanagan at the Toronto Western Hospital. Finally we have a big grant application pending with the CIHR (Canadian Institute of Health Research).

### **How does your volunteer program work?**

One of our board members (Richard Gallop) runs the program. The volunteers take the Society pamphlets and distribute them to the various doctors offices, hospitals etc. to increase awareness of our organization and thus increase membership.

### **You have something called a glaucoma simulator on your site. How does it work?**

This was provided by one of the drug companies. Anyone can go on the site and use it. It clearly shows the way that people lose vision with glaucoma. Unfortunately a lot of people are misinformed about glaucoma. The disease does not cause loss of central vision; side or peripheral vision is lost first and the simulator shows this very nicely. The loss of side vision worsens to the point where a patient is left with only tunnel vision and then finally complete loss of vision occurs.

### **How does your organization differ from the Canadian Glaucoma Society?**

It's very different. The Canadian Glaucoma Society is made up of eye surgeons with an interest in glaucoma. They meet on an annual basis to discuss new ideas, surgical techniques, latest data etc. It is an educational organization; the Glaucoma Research Society of Canada is a charity which raises the money to fund the work of these doctors and scientists who are working to find a cure for this disease.

### **What future direction and developments do you envision for glaucoma treatment in Canada?**

We are in a new world of stem cells and molecular biology. Although there are no new big breakthroughs expected within the next year or two, I do think that molecular

biology will provide some amazing new therapies in the next decade. I am sure it's going to happen. Scientists are looking at growth factors and other proteins/chemicals that will strengthen the optic nerve and enable sick nerves to regenerate. Hopefully one day we will be able to regenerate dead nerves but that's probably decades from now. From the treatment point of view there are exciting new surgical techniques and new drugs that are being developed, so in the next few years I think we will see some breakthroughs but nothing quite yet.

### **What is your general impression about how the public regards glaucoma? Is Canada doing enough education about the disease?**

The majority of Canadians do not understand what the risk factors are for glaucoma -- such as being over 40, a family history or being black. All eye care professionals need to do a better job of educating the public, especially regarding risk factors and also how glaucoma presents. The public generally seems to know that glaucoma causes blindness but they don't know it causes the loss of peripheral vision. Everyone at risk needs to be encouraged to visit an optometrist or ophthalmologist for regular eye checks, pressure checks and optic nerve checks. If you are both over 40 and have a family history you are five times more likely to suffer from glaucoma than the average person. We can't cure the disease; the best we can do is control it. Early diagnosis is the key to blindness prevention.

### **What role would you like Canadian eye care professionals to play to help forward your cause?**

I think all health care professionals including family doctors have an important role to play, particularly in the area of education and disease detection. It's not cost effective to go out and do mass eye pressure screenings. It's been shown time and time again not to be useful. The screening of at risk people however is cost effective. We need our colleagues to educate the at risk public to visit eye care practitioners for regular glaucoma checks.

What is so worrying is that some provinces like Ontario have delisted eye care exams for those under 65. So if you have a family history of glaucoma and you're under 65 you have to pay for the first visit. If you cannot afford it it's a disincentive to get checked. Once glaucoma is diagnosed the care is covered, but we know that the poor are suffering from this change in health care policy.

### **Let's switch gears for a moment. What do you do for relaxation?**

I have a number of hobbies. I am a horologist, a watch-maker...I fix vintage watches. But it's getting harder to do because of the Internet. The days of picking up old broken watches at antique fairs etc., fixing them and selling them on eBay are slowly disappearing. I am also interested in classic cars; I happen to have one and spend time in the summer working on it and driving it to car shows. Photography is a huge hobby, particularly animal photography. I am an ex African and still go back on safari.

**I have read that World Glaucoma Awareness Week is March 10-16 this year; how will Canada contribute to this worldwide education effort?**

The Society is always involved; we send out notification to our members to get them involved. Dr. Neeru Gupta on our board is also very involved. She ensures that eye care professionals across the country are aware of this week; she is often in the media talking about it. We usually get the hospital involved by setting up a screening area in the foyer - so there's a lot we do.

**What still excites you about your work?**

There is still a huge amount that needs to be investigated; there is a lot we don't understand about glaucoma. Not a week goes by when I don't think of another project we could potentially do. I love developing new ideas but what primarily brings me joy and happiness is helping patients.

**Do you think a cure will eventually be found?**

Yes I have no doubt about it. A cure will likely come from molecular biology or perhaps genetics. However we need to better understand the disease before this will happen.

**Any final words?**

Glaucoma is a bit of an orphan disease. It mainly affects older people...it's not sexy and so it's difficult to get media coverage. When we do it's usually late at night and no one sees or hears it. We need many more people especially eye care professionals to help us raise money by displaying the Society's pamphlets and helping to raise funds for research. Pamphlets can be obtained from Barbara Ullman at [info@glaucomaresearch.ca](mailto:info@glaucomaresearch.ca). Further information regarding donations and bequests can be obtained from the Society's president Mr. Martin Chasson at the same address.