Apropos

Most of us take our breath for granted, and yet the ingestion of air is the most important consumption we perform. We can live for days without water, weeks without food, but only a couple of minutes without breathing. The most certain method of verifying life is to check for the breath. We also tend to ignore the connection between emotion and breath even though we often hear an admonition to the effect of: “Just take a deep breath and calm down”. Our breath is so intimately tied to our emotions that the connection goes unnoticed and we forget that not only does emotion control breath but the opposite is true, our breathing controls our emotion. We are now in a time of significant political and economic uncertainty. There is little any of us as individuals can do about that, but we can try to remember that deep, even breathing will calm us and let us relax to enjoy this wonderful holiday season. The shorting of the days is nearly behind us. We are among the truly fortunate. We have the gift of breath. Practice deep breathing and your holidays are bound to be more happy and bright.

(Apropos reflects the views of the Editor but not necessarily those of the Club.)

Lung Transplantation – A Canadian Achievement

On December 7, Dr. Thomas R. J. Todd MD presented a history of lung transplantation which was first successfully accomplished at the Toronto General Hospital in November 1983 by a team of Thoracic Surgeons including Dr. Todd.

Experimental lung transplantation purportedly began in the former Soviet Union in 1946. Experiments in the 1950s sought to understand the physiology and to master the technique of re-implantation. Studies of the immunology of allografting in the 1960s lead to the first lung transplantation in a human at the University of Mississippi Medical Center in 1963, but the patient survived only a short time. In 1967 a lung transplant was attempted in Montreal, and again in 1977 at the Toronto General Hospital but neither were successful. By 1977, there had been 39 unsuccessful attempts at lung transplantation. Post mortems showed that the patients died because of failure of the airway union and/or poor function of the transplanted lung. This lack of success turned policy makers away from lung transplantation.

To overcome these problems and regain confidence in the procedure, the Toronto General Hospital undertook extensive research into the causes of the airway union failure and poor lung function

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by performing lung removal and re-implantation on animal subjects. During that research the team learned that a group of animals given steroids (the organ rejection control drug used at that time) following surgery healed unsuccessfully, while a control group of animals which were not given steroids demonstrated a normal healing response. They also knew that the lung was the only transplanted organ that was not provided with an oxygenated blood supply. The lungs receive de-oxygenated blood from the rest of the body and are required to extract oxygen from blood as it is oxygenated within the lung itself. The oxygenated blood supply to lung tissue is provided by extremely small arteries that run along the bronchial tubes and are necessarily divided during extraction of the donor lung. To overcome this problem they speculated that if they manipulated up a part of the greater omentum (a fatty tissue that depends from the stomach and encircles the intestines) to cover the airway union it would assist healing of the graft and promote healing of the bronchial union. To provide support to patients whose donor lungs did not immediately function well, they developed an artificial blood oxygenation (extracorporeal oxygenation) machine to support healing and sustain a patient’s life until the transplanted lungs were adapted to their new environment and began to function adequately. They also learned that cyclosporine, first approved by the FDA in 1983, had been successfully used instead of steroids to manage rejection in kidney transplants, because cyclosporine lets the bulk of the body’s immune system function normally to fight general infection. All of these advances paid off for a 69 year old man who was the first ever successful lung transplant patient. Of course, all of this came at a significant cost to our health care system. Dr. Todd estimates that the total cost per transplant in 1987 was about $200,000. And that another $400,000 was spent in research to achieve their success, but that research was largely funded by the patients themselves who showed outstanding support and dedication to the Toronto General’s lung transplant program. Those patients never lost faith, showed great courage, gave of their time and money to support the program. They were required to move to Toronto with a member of their family and waited up to 2 years for surgery. By 1986, the team had gained enough expertise and experience that they were able to perform the world’s first successful double lung transplant on Ann, who lived another 25 years before she died in 2001 of a brain aneurism.

Between 1986 and 1991 there was a gradual increase in the number of lung transplants at the Toronto General, but in 1991 decreasing resources resulted in the departure of four surgeons and the number of transplants declined until 1993. In 1990 even Dr. Todd was lured away from the Toronto General on a promise that he could start a new lung transplant program in Ottawa, but the funding never came through so he returned to the Toronto General in 1993. Since 2000 the number of lung transplants has dramatically increased at the Toronto General - from 44 in 2000 to more than 100 by 2007 and a total of 254 in 2015. Currently more than 90% of all lung transplant patients are alive and well 5 years after their surgery.

This success is due to better lung preservation techniques and the development at the Toronto General of in vitro lung preservation, which has actually managed to improve lung function outside the body while the lung was pending transplant. An increase in donors and donor awareness has also helped, as has improved intensive care techniques and facilities, significantly improved ventilator management, and novel drug therapies that have been developed to manage infection and control rejection.

Currently, unlike previously, there is no age restriction for lung transplant recipients. And marginal donors are considered given that lung function can often be improved using the newly developed in vitro preservation techniques.

Of course when a procedure achieves enough success to become routine, ethical issues demand considerably more attention. Operating teams and their administrators were constantly forced to make very difficult ethical decisions. For example, who has priority for the next transplant operation, the patient at most risk of dying, or the person who has spent the longest time waiting? Should a single or double lung transplant to be performed? If a single lung transplant is performed, 2 patients can benefit from a transplant operation, but each will have poorer lung function than the patient who gets a double lung transplant. And should re-transplantation be considered for a patient who has had a lung transplant but is failing? These patients are at much greater risk of mortality and 25% of all patients on the waiting list die before they have an opportunity for surgery. To address all of these issues, the Toronto General has turned to an ethics committee to assist them and their waiting patients understand and deal with these thorny issues.

Dr. Todd summarized with a critical look at the team’s own innovation, noting that their work will no doubt be supplanted by superior technology in the future and that
Lung Transplantation . . . Cont’d
the relative number of beneficiaries is very small considering the cost of each operation. Nonetheless, innovation and research may influence medical care in broad and unexpected ways, and without innovation the standard of medical practice is doomed to stagnation. In any event, medical innovators like him must deal with a lack of financial resources and accept the fact that in a single payer system innovation is only one of many priorities. Furthermore, administrative oversight can prove unduly restrictive even though that oversight is necessary to protect the public from charlatans. Given our system of universal health care, Dr. Todd believes that global delivery versus innovation has become the issue of our time.

If you would like to learn more about this issue, you may do so by procuring a copy of the book titled Breathless: A Transplant Surgeon's Journal, Dr. Todd’s reflections about his decades-long career as a transplant surgeon.

Congratulations to Dr. Todd and the team at Toronto General Hospital are certainly due for this sterling world first, a stunning Canadian achievement. And many thanks for his humble and well-structured presentation.

Personal Profile ~ Mary Vandenhoff
Mary Vandenhoff was born in Stonewall, Manitoba, just north of Winnipeg, and spent her summers at the family cottage. Mary’s parents were strong believers in education and she earned degrees from Queen’s (BA) and the National Autonomous University of Mexico (MA) in Mexico City which engendered in her a deep respect and love of Mexican culture.

Returning to Canada, Mary knew she wanted to assist Canadian exporters but realized she needed more education to be effective in her job, so she returned to school and earned a Masters of Business Administration from the University of Toronto. Upon graduation she fulfilled her dream, joining the federal Trade Department where her first assignment was trade promotion to Latin America. After 1½ years in Ottawa, Mary met Jack Vandenhoff, a scientific glassblower with the National Research Council who had three children. They were married and all lived happily together. Mary’s work required that she travel the world, but she remained stationed in Ottawa until 1988 when she was appointed

Personal Profile . . . Cont’d.
Ambassador to Finland. While stationed in Finland she watched the Soviet Union dissolve and the Baltic States achieve their independence, and in 1991 she was also appointed as the first Canadian ambassador to Estonia. Following her post in Helsinki, Mary was then transferred to Brazil and after a few years returned to Ottawa where she and Jack had a new grandson.

Mary and Jack owned a cottage near Westport but they were interested in finding more land where they could spend their retirement. Eventually they found the perfect spot near McDonald’s Corners where they built their dream home. Mary retired from her interesting career in international trade and foreign affairs. Besides her appointments to Finland and Brazil she served as Executive Director of the Arctic Council.

Of course Mary has not been idle since retirement. In 2003, as Lanark Highlands Chair of Community Economic Development, with the support of Bill Kemp she launched the Art of Being Green Festival. The same year Mary opened the Nature Lover’s Bookshop in Lanark Village, attracting customers from throughout the region. The bookshop was dedicated to promoting greater understanding and appreciation of the natural world. Mary received the Queen’s Golden Jubilee Medal for her contributions to community economic development and the Ontario Heritage Medal for her efforts regarding local heritage conservation and restoration. Mary also became a well-known environmental leader in Lanark and received the 2009 Ottawa Eco-Stewardship Award and in 2013 the Ontario Land Trust Alliance Vision Award. Mary was a long-time member and President of the Mississippi Valley Conservation Foundation and of the Lanark County Stewardship Council. She is currently a Director of the Mississippi Madawaska Land Trust where she actively promotes conservation and stewardship on private lands.

Mary leads a charmed life and felt she was the luckiest of persons until Jack passed away last fall. However, she loves her home in McDonald’s Corners and plans to remain there and active in the community as long as she can.

We are very fortunate to have Mary in the community and a member of Probus Perth.

A special vote of appreciation goes out to Don McDiarmid for all of his diligent work on membership. Don wishes to retire as soon as possible for health reasons. He will be sorely missed. Thank you, Don, for everything.
Lunch After January Meeting
To be held at the Legion following the meeting. Reservations must be made in advance (see Special Events below).

Quote of the Month
“For breath is life, and if you breathe well you will live long on earth.” - Sanskrit Proverb

Repeat Notice: Probus Canada offers travel insurance to all Probus members through Johnson Insurance. The rates seem to be quite competitive compared to most group plans. Additionally, the coverage seems to be more extensive and includes wider coverage for pre-existing conditions as well as out-of-province and out-of-country travel.

If you are interested in learning how you might be able to take advantage of this coverage contact Johnson at 1-866-606-3362 and tell them you are a Probus member. Alternatively, visit their website www.johnson.ca/medoc.

Special Events

- 90 attended the Christmas Dinner/Dance on Dec. 2nd. Plans are being made to hold our 2017 Christmas party at the same location with the same great music next year on Thursday, Dec. 14th.

- January 4th Lunch will be at the Legion after our first meeting of 2017. Lunch will be “lasagne and Caesar salad” OR “wraps with veggies”, dessert, tea & coffee. Cost is $10 per person. Please let Mary Kilgour know ASAP if you wish to make a reservation so she can inform the Legion ladies how much of each choice they have to make. Please pay by cheque at the January meeting. To date 59 have signed up to attend lunch.

- To date 40 have signed up to attend the January 21st Robbie Burns Dinner & Dance at the Perth Legion. Tickets will be sold for $30 at our January 4th meeting. Please pay by cheque. (Please write a separate cheque for each event you wish to attend. This makes reconciliation easier for us.)

Special Events . . . . Cont’d.

Save these dates:

- March 30- Dinner/Theatre at Studio Theatre- “Wrong For Each Other” by Norm Foster.

- May 31 – the annual trip to Ganonoque for the play “BOOM” at the 1000 Islands Playhouse”.

- Sept 30th- (Saturday) for the Fall Trip.

Speakers Corner
Our speaker on January 4 will be Archibald (Arch) Ritter an economics professor at Carleton University. He is focused on economic interrelations between developing countries and developed market economies, development issues in Latin America with particular reference to Cuba and Chile, public policy and the mineral sector, and issues of income distribution, social policy, and development.

The title of his presentation will be: "Cuba: Economic and Political Prospects?". This is a timely theme given the American rapprochement with Cuba under Obama and now the potential reversal of that rapprochement by the incoming Trump administration.

New Members Welcomed
New members (left to right): Gayda Errett and Aline McRory are welcomed by Don McDiarmed (far right) and President Richard Thomson.