CAIR EXPRESS

Winter 2019

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President's Blog

Hello fellow CAIR members,

2019 is upon us and I wish you all the best this year!

The Canadian Association for Interventional Radiology (CAIR) has been quite busy these last few months.

The Annual Meeting program committee, comprised of physicians, technologists and nurses, is hard at work. As usual, we have a stellar guest faculty this year: Dr. Victoria Marx (SIR President), Dr. Robert Morgan (CIRSE President), Dr. John Kaufman, and Dr. Wael Saad.

Congratulations to the program committee (Amol Mujoomdar, Tara Graham, David Valenti, Jessie Szarek, Linda Payne, Jeannie Brewster and Lynne Carson) for its great work!

The 2019 Annual Meeting will take place at the Hilton Toronto from May 30th to June 1st.

Look out for the debate session on the timely topic of "Paclitaxel-coated technology, time for a pause? Perspective from the experts". As many of you are aware, there has been a recent article published in the Journal of American Heart Association on the increased risk of death with paclitaxel coated balloons and stents. This has resulted in many societies (including the CAIR) to address this issue. Stay tuned.

The Lake Louise "Grand Slams and Catastrophe's" course is just around the corner! The 2019 edition of this highly interactive course will be as well attended as last year and will present many pearls (and pitfalls) that you simply can't learn from the books.

Our membership drive, under the theme ***There has never been a better time to join CAIR***, is producing remarkable results. So far, more than 25 physicians have either joined the CAIR or reactivated their membership. Interventional Radiologists throughout the country are realizing the value of the new benefits the CAIR now provides, which include access to all the benefits of membership with CIRSE and a one-stop shop for all the required CME credits (section 1, 2 and 3).

Dr. Jason Wong

We are getting very positive comments about the quality of the CAIR Express since Vamshi Kotha has agreed to take on the role of Editor. Great work Vamshi and many thanks!

As always, please feel free to drop me a line with any comments or concerns.

Take CAIR!

Jason Wong,
CAIR President

Catching up with... Dr. Manraj K.S. Heran

"There is no doubt that Canada is a world leader in the field of Pediatric Interventional Radiology. "

Dr. Heran is Associate Professor in the Department of Radiology at the University of British Columbia. Having completed fellowships in Pediatric Radiology, Vascular and Interventional Radiology, and Diagnostic Neuroradiology, he is a diagnostic and interventional neuroradiologist at Vancouver General Hospital, and a pediatric interventional radiologist at British Columbia's Children's Hospital. He is heavily involved in all aspects of medical education and clinical research, Dr. Heran is internationally recognized in both fields, and has served as the President of the Society for Pediatric Interventional Radiology (SPIR) twice.

Dr. Manraj K.S. Heran

CAIR Interview Question & Answers

1. What is the current state of Pediatric Interventional Radiology in Canada and how do we compare to the rest of the world?

There is no doubt that Canada is a world leader in the field of Pediatric Interventional Radiology. Centers of excellence, such as the Hospital for Sick Children in Toronto, CHU Sainte-Justine in Montreal, and British Columbia's Children's Hospital, provide state-of-the-art care for children, and offer comprehensive services that only a few centers around the world can provide. I am extremely proud of what we have accomplished in our institution, and this has been recognized locally, regionally, nationally, and internationally. However, in a country as vast as ours, unique challenges exist. There remain many urban centers across Canada where these services are not formally offered, either because of a lack of interventional radiologists with specialty pediatric IR skills, or as a result of insufficient physical and human resources to adequately support these programs. Smaller communities face even greater challenges considering the sheer size of Canada, and the considerable distances between major urban centers providing this very specialized care and the communities, towns, and cities they support.

"Perhaps the most important message to share with everyone is the profound opportunity that exists in Pediatric IR to do more for the children of Canada, and the world. "

2. Could you enumerate some of the ways in which Pediatric IR is different from Adult IR?

Pediatric IR is unique. Although the basic principles of IR are the same in children as in adults, the diseases, indications for treatment, specific physiologic issues, and tremendous range in size and physical maturity in children represent some of the key aspects which make Pediatric IR distinctly different from Adult IR. Concepts of care may be identical (ex: vascular access for hydration, nutrition, or providing medications); however, procedures, such as placement of a peripherally inserted central venous catheter (PICC line) in a premature baby weighing less than 1 kilogram, may represent some of the most technically difficult aspects of Pediatric IR. Innumerable differences exist ranging from patient specific concerns like temperature regulation, fluid balance and contrast dose limits, to technical considerations like minimizing ionizing radiation and challenges of adapting adult-oriented IR tools to children. Another key difference is a greater reliance on sedation and general anesthesia in Pediatric IR, with associated issues such as fasting status and controversies regarding potential negative effects of anesthetic medications. The vast majority of Pediatric IR procedures are performed in dedicated hospital-based IR practices, and not in outpatient centres or offices.

Another less recognized difference is the increased influence and involvement of the pediatric patient's care givers in his or her care. This includes consent and the dynamics that exist in all aspects of communication, including the disease process, role of Pediatric IR, proposed management plan, and expected (and sometimes unexpected) outcomes.

3. Do you have any memorable or challenging cases that you'd like to share with our readership?

Now in my sixteenth year of practice, I have had the privilege of being involved in the care of many, many children whose names, medical conditions, and unique family situations I remember vividly. These have included many 'firsts': treating a six year old boy for an acute ischemic stroke; placing a TIPS in a 9 month old; curing a ruptured brain aneurysm in a toddler; saving the only seeing eye of a child with a high grade retinoblastoma using intra-arterial chemotherapy; offering one or more options now available in the world of interventional oncology to so many children, curing them of their cancer, or giving them a better quality of life, or giving them more time with their family and friends. I remember all of them, especially those where we offered hope in situations where there was none. I have had the immense privilege and responsibility of having to eulogize some of the children who have passed away from their illnesses. Being asked to participate in this intimate, intensely personal, and emotionally devastating time in these families' lives represents one of the greatest honours which I have ever received.

4. Could you share with our readers of any upcoming news in the pediatric IR world?

Perhaps the most important message to share with everyone is the profound opportunity that exists in Pediatric IR to do more for the children of Canada, and the world. Although the philosophy in the most prominent Pediatric IR centres in Canada is to offer the full complement of IR care that currently exists for adults, there remain many, many children who, unfortunately, cannot benefit from this due to some of the challenges and issues that have been previously discussed. With respect to upcoming events and opportunities to learn more about Pediatric IR, although there are several meetings where our discipline will be highlighted, the Society for Pediatric Interventional Radiology (SPIR) Annual Meeting in October of this year will truly be one to not miss. No other meeting brings together so many experts in the field of Pediatric IR, or offers such an amazing exposure to the key areas of our specialty.

5. What is the Society of Pediatric IR doing to further the cause of the field in Canada?

It has been a tremendous honour and privilege to serve as the President of the SPIR twice. The basic mandate of the SPIR is to advance the specialty of Pediatric IR around the world, and to raise awareness of the opportunities that exist in all societies and countries, not just Canada, to provide all types of IR care to children, ranging from the most basic to the cutting edge. We have actively engaged in building better relationships with nations where this care is currently not offered in a formal capacity, or has been offered, but in a way that remains independent of the larger global picture and needs. India, China, and Brazil are some of the countries where we've made tremendous strides in building ties that allow for transfer of knowledge, skills, and ideas between those interested in Pediatric IR. Through embracing current modes of communication, including all arms of social media, there has been exponential growth in interest in the field of Pediatric IR -- in Canada, North America, and, indeed, all over the world. In many ways, Canada represents challenges and issues that SPIR encounters in all corners of the globe. Recognizing our needs, wants, and wishes here at home definitely helps SPIR relate to those in other countries where Pediatric IR may not be as developed. SPIR serves as a resource for many, and connects those far and wide with one another, bringing us closer together. Stalwarts of our specialty, such as Dr. Josee Dubois in Montreal, or Dr. Bairbre Connolly from Toronto, have had prominent roles in the inception and early years of the SPIR. That torch was then passed on to me, and now has been passed on to Dr. Joao Amaral from SickKids, carrying on a proud tradition of Canadian representation on the SPIR.

"There remain many urban centers across Canada where these services are not formally offered"...

6. How do your cross-appointments in neurology, neurosurgery and pediatrics help you in daily clinical work?

I feel extremely privileged. My training has been extremely broad and varied, and the mentors I have had along the way, and continue to have in my current joint position between the BC Children's Hospital and the Vancouver General Hospital, have all enriched me in

ways that are immeasurable. My specialty training in pediatric diagnostic radiology, adult and pediatric interventional radiology, pediatric interventional cardiology, and diagnostic and interventional neuroradiology allows me to approach clinical problems in a uniquely different way. Coupled with valuing and respecting the tremendous talents and strengths of the members of the neurology, neurosurgery, and pediatrics teams, cross-application of IR tools and techniques has allowed for expansion of the scope of what can get done in IR in both hospitals. This has also allowed me to be in a unique position to train those interested in Pediatric IR from a perspective that integrates multiple areas of clinical and IR expertise. As my friend and senior stroke neurology colleague once told me, "if you don't step up, you're stepping back". My cross-appointments serve as recognition of the value and respect that those clinical specialties have for the work we do, and the complementary nature of our specialties. Although not as formalized, this same relationship exists with every clinical team I work with: Spine, Orbital Surgery, ENT, Plastic Surgery, Orthopedics, Oncology, and others. Through working together, "today's difficult is tomorrow's easy", and we continually improve in all facets of our clinical work.

7. Given the model of practice in Canada, do you have any advice for IRs looking to develop a pediatric IR practice?

The first thing I would say is that Pediatric IR is an extremely gratifying specialty. As with all things, a greater awareness of what can be done for children, as well as seeking dedicated training in offering this care, will unlock a world filled with hope and opportunity to really make a difference. I would say that any IR aspiring to develop his/her Pediatric IR skills should not be afraid of spending adequate time to do this in a way that respects the pediatric patient and his/her family. Because Pediatric IR is so different from Adult IR, becoming comfortable with the nuances of these differences, and learning this complementary world of IR, will actually make the IR better in his or her adult practice. Canadian IRs are extremely lucky in a sense as they have many centres of excellence in Pediatric IR here in Canada, where formal training is offered. Given the challenges already mentioned in providing sufficient Pediatric IR care in many Canadian communities, the impact of this dual training will be immediate and extremely positive. Personally speaking, I would enthusiastically welcome any IR wishing to train with us. As we all know, taking the first step is always the hardest, but the rewards for setting out on the path of developing a Pediatric IR practice are tremendous, both personally and professionally.

8. In your opinion, which areas of pediatric IR have the most potential for growth in future?

Although there are obvious areas, such as Interventional Oncology, the truth is that all areas of IR have a profound potential for growth. Just like Adult IR is constantly changing, the world of Pediatric IR offers so many opportunities for developing new programs, and improving on existing ones. In such a dynamic field, the direction of IR may change completely with the development of a new drug, a new balloon, or a new catheter. As I do not believe we have maximized our ability to provide even the most basic of Pediatric IR care in Canada, improvements in process and personnel will directly translate into many more children being helped by what we do. The future is bright. And it's one where our colleagues here in Canada, and around the world, will continue to push the boundaries of medicine, offering better care, and greater hope, to the children we're privileged to look after.

Dr. Manraj K.S. Heran
MD, FRCPC

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Hot off the Press : 2018 in Review

2018 has been an interesting year for research in IR. There were several important advances in technology and clinical application across the world that have opened new avenues for IR to make an even larger impact on healthcare. This is an attempt to summarize some of the key advances IR has made in 2018.

Early in the year, investigators of the MASTERKEY-318 study (NCT02509507) reported findings of their phase 1b/2 study evaluating the safety and feasibility of intrahepatic injection of T-VEC, a genetically modified form of the herpes virus, in the treatment of liver metastases. Although percutaneous immuno-therapeutic techniques of treatment have been studied for many years and some agents are FDA approved, patient tolerance and adverse events have been a constant concern. Demonstrating safety and feasibility in hepatic metastatic disease in a wide range of cancer etiologies opens the door for future innovation.

Later at the Annual SIR meeting in Los Angeles, investigators from Emory university presented their data from a pilot study on 10 patients who underwent 'cryovagotomy' or percutaneous cryotherapy targeting the posterior vagal trunk to decrease appetite and induce weight loss. The role of the vagus nerve has been long recognized in controlling satiety and this advance offers a possible simple interven-tional technique to help a large cohort of patients battling obesity.

Another large cohort of patients, those with knee osteoarthritis, have hope of a new minimally invasive procedure. Geniculate artery embolization, first described in Japan, has shown promise in the treatment of moderate knee osteoarthritis, a challenging stage of the disease process. Investigators from the University of North Carolina completed the first North American trial (NCT02850068) on this procedure and reported excellent early pain relief in patients with knee osteoarthritis.

In August 2018, investigators from the Institut Bergonie in France reported their results from a phase II trial (NCT01841060) evaluating survival outcomes of percutaneous radiofrequency ablation for patients with stage 1A non-small cell lung cancer ineligible for surgery. They reported a local control rate of 81.25% at 3 years and an overall survival of 91.67% at 1 year with no significant change in global health status or quality of life following RFA.

Late in the year, post hoc analysis from the ATTRACT investigators (NCT00790335) reported significant-ly reduced early leg symptoms and reduced PTS severity scores over 24 months. Pharmacomechanical catheter-directed thrombolysis reduced the proportion of patients developing moderate-or -severe PTS and resulted in greater improvement of venous disease-specific QOL.

These are just a few of the important studies and trials published and presented in 2018. As evident, IR is making important strides in patient care and the future is bright!

Dr. Vamshi Kotha
Editor, CAIR Express

CAIR Cocktail at SIR 2019

CAIR Annual Meeting 2019

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