



Calgary Doctor is a Modern Day Cupid

Along with the heart, Cupid is probably one of the most recognizable symbols of Valentine's Day. It has been said that Cupid could mend a broken heart simply by drawing his bow and carefully aiming his arrow at the person in need. This is obviously a myth. Mending a broken heart is not that easy. But mending the 'broken hearts' of children born with Congenital Heart Disease (CHD) is becoming easier, with technology that allows a cardiologist to enter the depths of a child's heart without even scarring the chest.

Dr. Frank Dicke from the Alberta Children's Hospital is a modern-day Cupid. The tools he uses are not a bow and arrow, but a carefully aimed catheter. Dr. Dicke performs Interventional Cardiac Catheterization on children here in Calgary and also in Edmonton to help mend the 'broken hearts' of children with CHD.

Interventional Catheterization uses catheters which are inserted through the femoral artery or vein, the main blood vessels in your leg. A tiny incision is made, about the diameter of a pencil and the catheter is inserted in the blood vessel and threaded up to the heart, where the cardiologist does the work required.

What kind of 'broken hearts' can be mended by Interventional Cardiac Catheterization? Many Atrial Septal Defects (ASDs) can be mended by this technique. An ASD is a 'hole' that can occur in the wall of the heart between the two atria, the main collecting chambers of the heart. If not repaired, an ASD can make the heart's job of pumping much more difficult.

To mend an ASD, the surgeon directs the catheter up the femoral vein to the heart. The catheter carries with it a device called a Septal Occluder. A Septal Occluder is two wire mesh disks, covered with polyester. There is one disk on each side of the device with a small wire attaching the two. Once inside the heart, the cardiologist threads the Septal Occluder through the hole and lets the disks expand, effectively plugging the hole. Prior to the use of Interventional Catheterization for this procedure, a child with an ASD had to experience open-heart surgery, where the child's chest was opened as well as the heart wall itself. The child would be on a heart-lung machine for the duration of the surgery, typically a couple of hours. The risks of this type of surgery include blood clots from the heart-lung machine and complications from the large surgical wound on the chest. As well, the child would require a hospital stay of up to two weeks to recover. With Interventional Cardiac Catheterization, the child can typically have a hospital stay of a day or two. They can go home fully mended, with only a small incision on their leg.

Children who have defective or leaking pulmonary valves can also benefit from Interventional Cardiac Catheterization. The pulmonary valve is a flap-like structure which prevents the back-flow of blood as it is pumped from the right ventricle to the lungs. If this valve is defective or leaky, it can cause the right ventricle to enlarge and become less effective in pumping blood to the lungs. In this procedure, the catheter is aimed up the femoral vein to the heart. This time the catheter carries with it a compressed valve, which is made by sewing a valve from the jugular vein of a cow to the inside of a metal stent or support. Once in place, the stent is expanded and the new valve is put in place, ready to do its work. Valve replacement is likely to become more routine in the next few years and in the future Interventional Cardiac Catheterization is likely to be used in the repair of other types of heart disease.

February 7-14 is Congenital Heart Defect Awareness week in Calgary. An estimated 180,000 Canadians have Congenital Heart Disease (CHD) of which, approximately 8,000 reside in the Calgary area. How can you help during this week? Visit the Heart Beats' Website (www.heartbeats.ca) to learn more about Congenital Heart Disease. You may send an e-card to let others know that you care about children with this condition. You may also donate to Heart Beats to help provide financial assistance to families having difficulties meeting expenses related to their child's heart defect.

The Heart Beats Children's Society of Calgary (www.heartbeats.ca) is a grassroots, registered charitable organization offering information, resources and emotional support to families dealing with Congenital Heart Disease (CHD). Since 1987, our group of parents, caregivers and professionals have provided practical and compassionate service to children and families impacted by Congenital Heart Disease (CHD).

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