SCT Newsletter

March/April 2015

Hello and welcome to the March/April edition of the SCT newsletter. I have kicked off the year of the case study personally with my offering below but as always I would like to encourage people to send me things to include in the newsletter at Gary.Zealand@hawkesbaydhb.govt.nz.

CSANZ meeting 2015

The CSANZ meeting will be held next month in Auckland from the 4th-6th of June 2015. As always there will be plenty on offer for physiologists including the SCT Business Meeting on Thursday 4th June 12:30-13:30. This is open to all SCT members and is an open forum for discussion. Attendees will be updated with the work of the SCT Council and the SCT Education Committee and Professional Development Group. Find out about the Physiologist Steering Group for HRSNZ. What are the Apex Working Groups? Hear about discussions in regards to Advanced Practice, Merit Progression, Workforce and Salary and Relativity. Also on Friday 5th June from 13:30- 15:00 there is the SCT Symposium featuring Heart Failure in Adult Congenital Heart Disease, and includes the top MTEX presentation.

Date for your diary

The central region cardiology conference will be held at the Wellington Hospital education centre on Friday the 13th of November 2015 from 8:30am to 5:00pm. Further details will follow closer to the time.

SCT Subscriptions

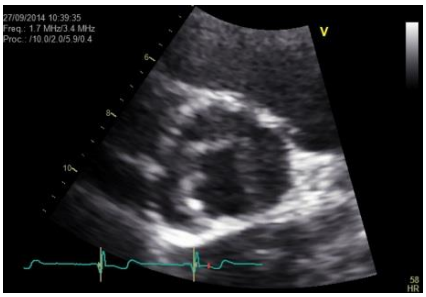
Just a friendly reminder that the SCT invoice for 2015-2016 subscription was sent out last month and payment is due. Thanks to all members for your continued support.

Take a deep breath and count to five

By the time I moved to New Zealand in 2010, I had been a full time echocardiographer for four years but somehow had only ever scanned two patients with bicuspid aortic valves. I remember this vividly as in order to obtain my British Society of Echocardiography accreditation I had to submit a portfolio of reports including ‘some’ examples of congenital

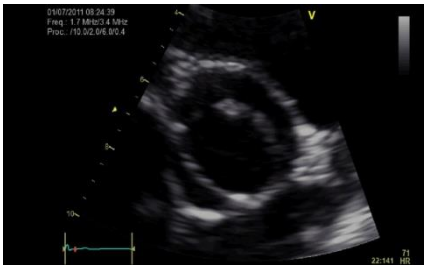
heart disease. I had seen so few examples of congenital pathologies I wondered at length the smallest number ‘some’ could represent. I ended up submitting 2 Bicuspid aortic valves and an ASD. Since I moved to Hawkes Bay I have been exposed to a huge range of pathologies and have since seen (almost) every kind of aortic valve so I thought I would share some of the ones I have been fortunate enough to see during my time here, in numerical order of course.

Unicuspid



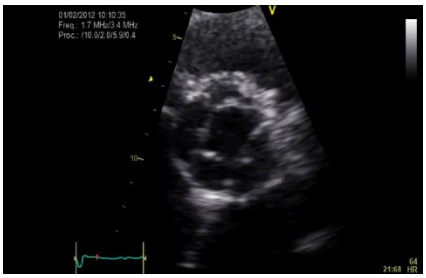
A Unicuspid aortic valve is an unlikely find, present in just 0.02% of patients on echocardiography (Mookadam 2010). There are two different forms of unicuspid aortic valve, an acommissural type which has a pinhole shaped orifice and a unicommissural form which has a slit shaped orifice, or ‘toilet seat appearance’ for the low brow among us (myself included). The acommissural form usually causes symptoms at birth while the unicommissural form, such as my example is more likely to be found in adulthood.

Bicuspid



Bicuspid aortic valve is the most common congenital heart defect with an estimated prevalence between 0.5% and 2% (Siu et al 2010). There are multiple variations of bicuspid valve morphology that can occur with fusion of different commissures or pure bicuspid valves where no raphe are present. The discovery of a bicuspid valve should lead to careful examination of the aorta as dilatation of the thoracic aorta and coarctation are associated with this abnormality.

Quadricuspid



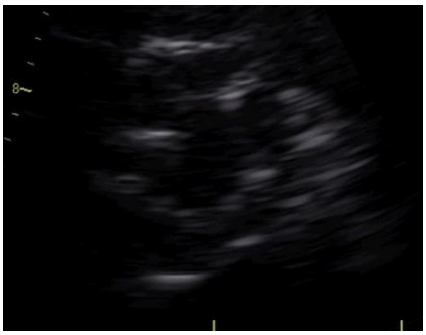
More than 190 of these cases have been reported in literature but they are a rare entity with a reported incidence ranging from 0.003 to 0.043% (Feldman 1990). Aortic regurgitation is the most prevalent haemodynamic abnormality in quadricuspid valves whereas valvular stenosis is surprisingly rare (Armen 2007). I have scanned two patients with quadricuspid aortic valves and both times I found myself mesmerised and ended up with stored clips into triple figures.

Penticuspid / Quinticuspid

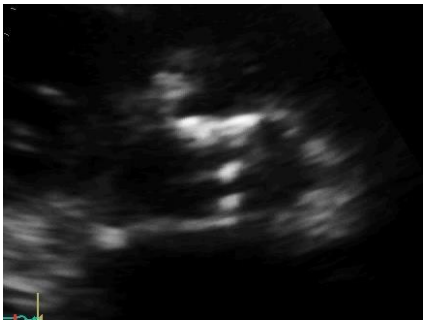
I have to hold my hands up and admit that the image on the left isn't mine. I have never scanned anyone with a five leaflet valve, or maybe I have as the valve on the left was initially reported as a normal trileaflet valve and the only reason that a TOE was carried out was to assess the inter-atrial septum and prolapsing mitral valve (Cemri et al). A pentacuspid valve is extremely rare with only 6 cases described as of 2012 (Kuroki 2012). If anyone has any images they have taken themselves of one of these valves, it would be great if you could send them to me for inclusion in the next newsletter. If you have seen one of these amazing valves on a study but don't have any pictures please e-mail and tell me all about it at my other e-mail address Gary@idontbelieveyou.com.

This is a slightly misleading start to the year of the case study as this is not really a case study it's more me sharing some examples of aortic valves that I have seen.

I suppose if I had a take home message when it comes to aortic valves it would be that if it looks unicuspid, quinticuspid, smiles at you when you are having a tough day,



Or you have no idea what's going on,



A good place to start is to take a deep breath and count to five.

References

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