



## The bar that gave me my life back

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*“The biggest difference is with the physical symptoms. When I was 18 I was playing on the wing for our school first 15 at rugby yet finished 164<sup>th</sup> in the cross-country run! Even then I had a reputation for a lack of stamina. This gradually worsened over the next decade and by the time I was 28 I would become very unwell when doing sport, coughing up large amounts of white phlegm, unable to breath, my heart pounding and feeling like I would pass out.”—Dr. Charles Smith.*

This is a statement from a patient who had severe pectus excavatum. He was 29 years old when he was referred to our thoracic unit. He presented with symptoms as described above. Pre-operatively, he managed 14 minutes on Bruce protocol treadmill test, but his systolic blood pressure dropped from 190 mmHg down to 103 mmHg at peak exercise. Subsequent cardiac magnetic resonance imaging (MRI) demonstrated compression and distortion of the right ventricle as a result of his pectus excavatum. We performed a Nuss bar correction in January 2013.

The Nuss procedure is a minimally invasive procedure named after its inventor, Dr. Donald Nuss. Through two small incisions on each side of the chest, under thoracoscopic guidance, an introducer is pushed along the posterior aspect of the sternum, anterior to the mediastinal structures thus creating a safe tract for the passage of the bar. The bar is specifically pre-shaped to correct

the concavity of the sternum. With a thoracic epidural and a standardised regimen of analgesia the immediate pain issues with this procedure have been well addressed in recent years. The bar is removed 2–3 years after its insertion.

*“It took me weeks to adapt to the bar physically. With time things got better. Now I have the bar out, I have returned to my rugby and judo and now I am much more competitive and able to enjoy activities. I am able to move from the wing to the back-row at rugby. I am able to run now for 80 minutes, which was an impossible task prior to the pectus correction. I can also enjoy fatherhood now playing with my daughter, running around without worry of passing out. The operation has had a huge impact on my life.”*

Objectively his functional improvement was confirmed by a repeat Bruce protocol treadmill test that he got to finally end without being stopped.

There is a growing body of evidence that supports that correction of pectus deformities is associated with improvement in cardiovascular reserve and quality of life as well as the obvious cosmetic correction (1).

With the withdrawal of funding for pectus repair surgery, deemed as cosmetic and of low clinical value, we are concerned that this patient group will be denied the chance of improved cardiovascular functional capacity as well as

improved quality of life by this minimally invasive procedure.

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### Footnote

*Conflicts of Interest:* The authors have no conflicts of interest

to declare.

### References

1. Udholm S, Maagard M, Pilegaard H, et al. Cardiac function in adults following minimally invasive repair of pectus excavatum. *Interact Cardiovasc Thorac Surg* 2016;22:525-9.

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