

Awareness of Pectus Excavatum and Associated Treatments among General Practitioners

N. Connolly¹, S. Cheong², G. Mullervy³, B. Antao³.

1. Malahide Community School, Broomfield, Malahide, Co. Dublin, Ireland.
2. University College Dublin, School of Medicine, Belfield, Dublin 4, Ireland.
3. Beacon Pectus Service, Beacon Hospital for Kids, Beacon Court, Sandyford, Dublin 18, Ireland.

Abstract

Aims

Pectus excavatum (PE) is frequently seen by primary care providers. The study aim was to evaluate awareness of PE among general practitioners (GPs).

Methods

A 22-item anonymous survey was distributed to 381 GPs around Ireland in 2024.

Results

There were 17/381 (4.5%) responders. 5 (29.4%) indicated good/very good knowledge of chest wall deformities and 11 (64.7%) confident in identifying cases of PE. 2 (11.8%) of GPs encountered 5 PE patients, while 5 GPs (29.4%) had no encounter with PE over the past year. 8 (47.1%) were aware of treatment options with 11 (64.7 %) rated their knowledge of Vacuum Bell Therapy (VBT) as being very poor/poor.

Conclusion

GPs often exhibit insufficient awareness and knowledge regarding PE, leading to under-diagnosis and inadequate care. It highlights the need for further education among GPs regarding the treatment pathways available for PE.

Introduction

Pectus excavatum (PE) is a congenital chest wall deformity characterised by a sunken sternum, occurring in approximately 23 per 10,000 births.¹ Although often considered a cosmetic issue, PE may cause symptoms including exertional dyspnoea, chest pain, heart murmurs, psychological distress, and reduced self-esteem. Especially for general practice,

this is relevant as most patients with PE are usually managed within the primary care setting. The study aim was to evaluate awareness of PE and treatment options among general practitioners (GPs).

Methods

A 22-item anonymous survey was distributed to GPs around Ireland in November 2024. The Health Service Executive (HSE) Find a GP website was used to obtain contact details of GP surgeries (1,557) of which 392 included email address.

Results

Of the 392 GPs to whom the survey was emailed, there were 11 email delivery failures. There were 17/381 (4.5%) responders.

Among the GPs surveyed, 47.1% (n=8) were based in rural surgeries, 29.4% (n=5) in an urban area, and 23.5% (n=4) in a suburban area, with 52.9% (n=9) having over 2,500 patients, and 58.8% (n=10) had 4 or more fully qualified GPs. In relation to Continuing Professional Development (CPD) activities, only 5.9% of GPs (n=1) reported CPD activities, while 82.4% (n=14) reported none aimed at congenital conditions.

Knowledge and awareness of PE and its associated treatments among GPs is summarised in Table 1. Despite only 29.4% (n=5) indicating that their knowledge of chest wall deformities was good/very good, 64.7% (n=11) were confident that they would be able to identify cases of PE. Common signs and symptoms of PE such as visible chest wall indentation, chest pain, shortness of breath, and decreased exercise tolerance were correctly identified by more than 75% of the cohort, while less common symptoms such as fatigue and irregular heartbeat in less than 50% of the cohort.

11.8% (n=2) of GPs had encountered 5 PE patients, while 29.4% GPs (n=5) had no encounter with PE over the past year and 58.8% (n=10) had encountered 1 or 2 patients in the previous year. Diagnoses occurred after a post-pubertal growth spurt in 47.1% (n=8) of patients, during childhood in 29.4% (n=5), and at birth/infancy in 17.6% (n=3); none were diagnosed in adulthood. 47.1% (n=8) were aware of different treatment options with 64.7% (n=11) of the respondents rated their knowledge of Vacuum Bell Therapy (VBT) as being very poor/poor. 52.9% (n=9) identified VBT as better than surgical procedures in terms of both cost and clinical risk and only 23.5% (n=4) of respondents identified that the treatment outcomes with VBT would be better than operative treatment.

Discussion

While most GPs are confident in their knowledge of PE and ability to diagnose it, there is a lack in the knowledge of treatment options available. 70.6% (n=12) of respondents had encountered at least one case of PE in the previous year and 94.1% (n=16), at some stage in their training. This could also be the reason for the poor response rate to the survey, whereby only GPs familiar with the topic were likely to complete the survey.

As important as it is to be able to diagnose PE, as the first point of contact for most patients it is crucial that GPs are also aware of the treatment options available. Despite VBT being the mainstay of PE treatment,²⁻⁴ only 5.9% of GPs (n=1) rated their knowledge as good. In a study by Tikka et al, the lack of awareness in primary care often leads to misdiagnosis or a lack of referral to specialised units for an assessment.⁵ Various studies have shown that the successful correction with VBT is associated with factors such as younger age, chest wall flexibility, and initial chest wall depth, highlighting the importance of early referrals by GPs in increasing the success rate of treatment.^{6,7} A limitation of this study is the small amount of responses received. However, it highlights the need for further education among GPs regarding the treatment pathways available for PE.

In summary, GPs often exhibit insufficient awareness and knowledge regarding PE, leading to under-diagnosis and inadequate care. The reason for lack of awareness among GPs could be a combination of factors namely: misconception of being cosmetic and lack of understanding of the functional and psychosocial impact of PE, lack of widespread exposure to this relatively uncommon condition, complex nature of this condition with a wide spectrum of symptoms, and lack of awareness of the available treatment options resulting in delayed or misdiagnosis and delayed or non-referral to specialized centres for assessment and treatment. Recommendations for improvement in treatment and management of PE within the primary care sector include improved education for GPs about PE and its associated symptoms and treatment options and promoting prompt and timely referral to specialized centres for comprehensive diagnosis and treatment planning. The development of uniform care pathways and definitions for chest wall deformities could improve consistency and quality of care.

Table 1: Knowledge and Awareness of Pectus Excavatum (PE) and its associated treatments amongst General Practitioners (GPs).

Knowledge/Treatments	Number of Respondents					Total
Conditions involving chest wall deformities	1	3	8	3	2	17
Operative procedures	4	4	7	1	1	17
Non-operative procedures	4	5	6	2	0	17
Vacuum Bell Therapy	9	2	5	1	0	17
Physiotherapy as an adjunct	1	0	7	4	5	17
Psychological Support	0	0	0	6	11	17

*1= very poor, 5= very good

Declarations of Conflicts of Interest:

None declared.

Corresponding Author:

Brice Antao,
Beacon Hospital for Kids,
Beacon Court,
Sandyford,
Dublin 18,
Ireland.

E-Mail: brice.antao@beaconhospital.ie

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