

EDITORIAL

Erectile dysfunction in young men: a sentinel marker for emerging Non-Communicable Diseases

Arvinder-Singh Harbaksh Singh^{1,2,*} , Rukman Awang Hamat² , Josephine Paul¹ , Harpreet-Kaur Harbans Singh¹, Muhammad Nuh Idy Razlan¹ , Devin Kumar Asoka¹ , Sivanewaran Lechmiannandan³ , Christopher Ho⁴ , Harbaksh-Singh Mehar Singh⁵, Philip Rajan^{1,6} 

¹Clinical Research Centre, Perak, Hospital Raja Permaisuri Bainun, Ministry of Health, Institute of Clinical Research, NIH, 30450 Ipoh, PRK, Malaysia

²Faculty Research Support Unit (FRSU), Faculty of Medicine & Health Sciences, Universiti Putra Malaysia, 43400 Serdang, SGR, Malaysia

³Department of Surgery (Urology), Sunway Medical Centre, 31150 Ipoh, PRK, Malaysia

⁴Department of Surgery, Taylor's University, 47500 Subang Jaya, SGR, Malaysia

⁵Family Medicine Specialist, Klinik Shatin, 31650 Ipoh, PRK, Malaysia

⁶ORL Department, Ministry of Health, Hospital Raja Permaisuri Bainun, 30450 Ipoh, PRK, Malaysia

*Correspondence

arvindersingh@moh.gov.my

(Arvinder-Singh Harbaksh Singh)

Abstract

We are seeing many diseases in younger people that were previously associated with older adults, and erectile dysfunction is now one of them. Previously linked with the elderly, it has now become an indicator of potential metabolic conditions and even cardiovascular events. Given its increasing prevalence, its potential role as a predictor of comorbid conditions, and its possible impact on fertility, it is perhaps high time that insurers, funders and stakeholders consider including both its diagnosis as well as treatment in their health policy coverage. Encouraging primary care providers to play an active role in screening and providing initial treatment might be a way forward.

Keywords

Erectile dysfunction; Men's health; Non-communicable diseases; Insurance coverage

1. Introduction

Some diseases are stigmatised with age [1]. Unfortunately, ageing is routinely associated with forgetfulness and dementia; frequent nighttime urination is related to prostate disease, and osteoporosis is linked to poor gut absorption—all of which are again often linked to the advancing age of a man [2]. But how wrong have we been about this over the years? We are now seeing younger patients being diagnosed with cancers (that were once seen amongst the elderly) [3, 4]. We are also now seeing young-onset of dementia, diabetes, strokes, and even myocardial infarctions in middle-aged adults [5–8]. This is similar to the condition of erectile dysfunction [9, 10]. Once linked exclusively to elderly men and viewed primarily as a disorder of sexual function, it is still a condition that is associated with relatively little importance [11]. But what if erectile dysfunction is seen in younger age groups? What if it might be affecting fertility? What if not addressing it adequately actually means turning your back on a predictor of cardiovascular diseases [12]? What if it was also linked to early mental health issues [13, 14]? This is an emerging area in the andrology field in recent years.

In a recent study published in the Oxford Academic series, “Sexual Medicine”, it was stated that 32.7% of sexually active

Malaysian men between the ages of 18 and 39 suffered from erectile dysfunction [9]. This might also be true for many similar countries; however, research conducted to identify prevalence might offer very little accuracy [15, 16]. Most importantly, in studies that have included patients from all ages—including those who were young and old—many studies have reported that even younger men were already suffering from erectile dysfunction [15–18]. Here's the worrying part—the trend seems to be increasing with every study done over time. But then again—why is this a big deal?

2. What's the big deal?

2.1 The link to fertility

Sexual function in the younger men (≤ 40 years of age) is normally linked to fertility [19]. Many might ask, “don't we have fertility treatments that can solve this? Why the fuss about erectile dysfunction?” Well, on the ground, the authors note that many men from the reproductive age group are presenting for treatment due to the inability to conceive a child within their relationships, similar to the findings from Canada and other countries worldwide [12, 20]. It is also important to note that many men can conceive a child once their erectile

dysfunction therapy is successfully treated. Could this be an indicator of a cause for countries that are seeing lower rates of childbirth among their reproductive age groups? With sexual dysfunction linked to fertility, it might be a possible factor explaining certain countries having lower birth rates [19]. Perhaps countries that are experiencing low birth rates (with multi-modalities already attempted) might benefit from screening for erectile dysfunction among men in couples who are unable to conceive.

2.2 The link to metabolic conditions

According to studies conducted around the world, erectile dysfunction is considered a potential predictor of cardiovascular health. A study conducted in Sweden showed that men with erectile dysfunction but without cardiovascular disease had a reduced coronary flow reserve, which was indicative of an early marker of atherosclerosis [12, 21]. Similar findings have been observed in patients with diabetes, obesity, and among smokers [22, 23]. Could this perhaps mean that shared underlying factors affect erectile dysfunction and are linked to cardiovascular risk factors, which are worsened by being overweight, smoking, and diabetes? This linkage has already been discussed extensively in clinical research papers that suggest that they are all connected [23, 24]. Are these factors, including erectile dysfunction, possible predictive factors for the development of cardiovascular disease later in life? If you think about it, can those who present with an early age of erectile dysfunction actually be having silent or undiagnosed metabolic conditions like diabetes, hypertension, *etc.* [23, 25]? Is this where our so-called hidden non-communicable disease “pandemic” is? Can this be used as a marker to predict potential comorbidities among men in the future? The simple answer might be a big “yes”. There have also been studies suggesting that erectile dysfunction is linked to poor diet consumption, meaning that erectile dysfunction might also be a predictor of diet consumption [18].

2.3 The link to mental health and occupational health conditions

We know that erectile dysfunction has been associated with mental health conditions like stress and depression [26, 27]. However, can erectile dysfunction now be considered as an indicator that may prompt screening for associated mental health conditions? We know that erectile dysfunction can be linked to psychogenic causes, and perhaps mental health issues (such as depression and anxiety) are plausible contributing factors [26–28]. Although erectile dysfunction can result from many causes, recent studies have also indicated that erectile dysfunction can be linked to deteriorating mental health [28]. We are also hearing reports, especially after COVID-19, about mental health issues developing and increasing in prevalence, especially among younger people [29]. Perhaps erectile dysfunction might be an opportunity for young men to seek help, as it might be linked to underlying mental health concerns.

Is this the missing link towards mental health screening, with erectile dysfunction serving as a potential indicator? Can this also be a link to occupational health-related mental health conditions? Perhaps erectile dysfunction could be a symptom

that prompts consideration of screening for mental health conditions, especially those associated with the workplace.

3. Is erectile dysfunction the missing link towards healthcare screening?

Perhaps erectile dysfunction might be more than a measure of fertility and sexual function. It might be a marker of early onset of different comorbidities [21, 23, 25]. A few studies have also linked it to the early onset of potential endocrine disorders [30]. Could this represent a potentially useful early warning signal for the medical community? Could it help healthcare professionals identify, screen for, and manage underlying conditions earlier, before the development of end-artery complications? Perhaps, one can confidently say that erectile dysfunction is an overlooked symptom that might be the key to determining the burden of disease in the future [23]. Knowing this, the medical community can now work towards preventing future medical complications associated with metabolic and mental health conditions by encouraging early age screening as well as early initiation of treatment. In modern times, screening for erectile dysfunction can be conducted using validated questionnaires, which can be completed privately and without the need for any guidance, potentially reducing embarrassment associated with a sensitive subject like this [31]. Perhaps, screening for erectile dysfunction among men in the younger age group might be one of the keys to screen as well as detect early metabolic conditions and to initiate interventions to prevent potential complications—especially those related to diabetes and cardiovascular health [27, 32–34].

With the idea that erectile dysfunction is no longer a disease of the elderly, perhaps it is also worth considering whether funding agencies and insurers should cover this component in medical care—not only for therapy but also as a potential opportunity to prompt screening for associated conditions. After all, we know that many countries have included obstetrics and gynaecology in their healthcare insurance. If men’s health, especially erectile dysfunction, is covered by insurance policies, perhaps we might get more men coming forward to be screened, especially given its association with metabolic conditions. With a mental health component that could potentially affect erectile function, it might also provide an opportunity to assess the mental health status of young men. Those with erectile dysfunction and concerning findings on a mental health screening might benefit from undergoing a full mental health screening by qualified personnel. We know that in the post-COVID-19 era, many more people are opening up about their mental health, but perhaps we can identify these concerns earlier, and facilitate timely treatment to improve outcomes.

4. Why should stakeholders, insurers, and funders consider erectile dysfunction as a sign for screening?

With the escalation of healthcare costs associated with treating diseases rather than preventing them, perhaps the approach to reducing healthcare expenditure associated with disease treatment is to focus more on prevention. Public health ad-

vocates, stakeholders, and governments should perhaps start looking at the possibility of screening for men's health—not only for male sexual well-being, but also as an opportunity to perhaps pick up early comorbidities associated with metabolic and mental health issues. Since erectile dysfunction affects both younger and older men, screening might involve a larger portion of the population. It is an ideal circumstance for stakeholders, insurers, and funders to involve primary care practitioners in taking an active role in screening and initiating appropriate early treatment. This will not only potentially prevent overcrowding in hospitals in the future for urgent conditions, especially involving metabolic states, but it will also provide an opportunity for more comprehensive and holistic assessment of those affected in the younger age group. Reducing complications associated with end-artery damage due to metabolic conditions, potentially increasing healthy life expectancy and improving quality of life in the geriatric age are some of the possible benefits of early screening. However, the benefits can only be observed many years later and not immediately.

5. Conclusion

With erectile dysfunction being linked to multiple causes and potentially serving as an indicator for future non-communicable disease risk, perhaps it is only appropriate to consider whether funders, stakeholders, and insurers should include assessment and treatment of erectile dysfunction within healthcare coverage. The benefits that the healthcare fraternity might potentially reap include reducing the number of end-artery complications, as well as identifying mental health concern earlier. This might be a feat that our next generation will benefit from and thank us for. Are we potentially looking at the next big screening that will eventually reduce the number of complications from metabolic and mental health diseases? However, we must first move beyond the idea that “erectile dysfunction only happens in the elderly”!

AVAILABILITY OF DATA AND MATERIALS

The researchers did not collect data from any participant or use any materials for data collection.

AUTHOR CONTRIBUTIONS

ASHS, SL, PR—conceptualised the paper, wrote the manuscript, and edited the manuscript. RAH, DKA—sourced adequate relevant literature, wrote part of the manuscript, and revised the manuscript during all review rounds. JP, HKHS, MNIR, CH, HSMS—sourced adequate relevant literature, wrote part of the manuscript, and revised the manuscript during the first and second review rounds. All authors read and approved the final manuscript.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

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CONFLICT OF INTEREST

The authors declare no conflict of interest. Christopher Ho is serving as an Editorial Board members of this journal. We declare that Christopher Ho had no involvement in the peer review of this article and has no access to information regarding its peer review. Full responsibility for the editorial process for this article was delegated to JHY.

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