Affect and heart disease

Are linked, but the mechanisms are unclear

Although connections between emotions and the health of the heart have been postulated for centuries, population based empirical studies were not available until recently. Early interest in the 1970s centred on the type A behaviour pattern characterised by a tendency towards impatience, anger, competitiveness, and achievement. On the whole, however, findings on type A behaviour as a risk factor for coronary heart disease were inconsistent, leading to the notion that subcomponents such as anger may have a more definitive role.

More recently, studies on psychological risk factors have focused on anger, anxiety, and depression. Although the topic is continually debated, many prospective studies suggest that anxiety and depression increase the risk for heart disease, especially incident heart disease. Results for anger are more mixed.

The linked study by Nabi and colleagues uses data from the Whitehall II study to examine the association between affect and the development of incident coronary heart disease over 12 years of follow-up. Coronary heart disease was defined as the occurrence of fatal coronary heart disease, first non-fatal myocardial infarction, or first angina. This paper adds to the literature by considering negative affect, which may function as a higher order psychological construct or general disposition that underlies previously studied emotions such as anger, anxiety, and depression.

Nabi and colleagues also looked at the independent influence of positive affect. High positive affect does not necessarily correspond with low negative affect, and most work has focused on the role of negative emotions rather than positive ones. Nabi and colleagues conclude that there is a weak positive association between negative affect and coronary heart disease, but no association for positive affect or for the balance between positive affect and negative affect.

The lack of stronger findings may relate, in part, to the measure of affect and the time between assessing affect and outcomes. Affect was measured by the Bradburn affect balance scale, which was designed to measure overall psychological wellbeing at a given point in time. The scale consists of questions on feelings over the past few weeks and was explicitly designed to capture affect within a particular time period rather than longer term trends reflecting more enduring dispositions.

Affect can be conceptualised as a state, reflecting a short term experience of emotions brought on by specific situations, or as a trait, reflecting a more stable and general disposition. Because traits are sustained over a longer period, they may have more effect than states on the development of chronic diseases, including coronary heart disease, which are the product of pathophysiological processes that evolve over time. In contrast, short term emotional states may be relevant as triggers for acute events that occur in close time proximity.

Nabi and colleagues assess the influence of affect assessed at the start of the study and the subsequent development of coronary heart disease over 12 years. Although the affect balance scale does measure affect over weeks rather than days, its stability over time in the study sample is unclear. Correlations between affect scores assessed at phase 1 (1985-8) and phase 2 (1989-90) were in the range 0.52-0.55, which suggests only moderate consistency even during the initial part of the study. Further research is needed to explore the differential effects of emotional states versus traits and the disparate mechanisms by which they can influence cardiovascular and other health outcomes.

The study of affect and health can be considered in the broader context of research on social inequalities in health and may help to clarify the influence of social factors. If, for example, negative affect is associated with both low socioeconomic status and poor health, it may be one of many mediators in the formation of gradients of socioeconomic status in health. Such gradients are inadequately explained by adjustments for conventional risk factors and access to medical care.
Endoscopic ablation for benign enlargement of the prostate

Newer techniques are no better than transurethral resection, but the evidence base is poor

The prevalence of prostatic enlargement on rectal examination reaches 50% at age 70 and directly correlates with age. The age dependent prevalence of bothersome lower urinary tract symptoms, usually attributed to prostatic enlargement, has been demonstrated in population based studies in many countries, with moderate to severe symptoms being present in 27-56% of men aged 70-79 years in Scotland, France, Japan, and New Zealand.

Transurethral resection has been the procedure of choice for surgically treating prostatic enlargement since the 1950s. Its use peaked in the late 1980s and has declined with the introduction of medical treatment and alternative surgical techniques. Drivers of the development of alternative surgical methods include bleeding, electrolyte abnormalities, and prolonged hospital stay associated with transurethral resection. The linked systematic review by Lourenco and colleagues compares several alternative methods of creating an immediate opening in the prostatic urethral channel to the gold standard—transurethral resection of the prostate. These techniques can be broadly categorised as enucleation, resection, and laser ablation (collectively termed endoscopic ablation by Lourenco and colleagues).

In enucleation, the adenoma is shelled out from the capsule of the prostate. Intuitively, enucleation should offer the best chance of improving symptoms and flow rate because the entire adenoma is removed. Historically, enucleation was done through an abdominal incision. Today, endoscopic holmium laser enucleation of the prostate offers a minimally invasive method of enucleation; however, it is time consuming and technically challenging. In resection procedures—such as transurethral vaporization, bipolar transurethral resection, or the gold standard (monopolar) transurethral resection—the adenoma is excised piece by piece. These procedures should be equivalent to enucleation if resection is carried down to the capsule. Laser ablation opens the prostatic urethra by evaporating the adenoma. This was originally tedious and reserved for smaller prostates. With refinements in technology—including higher energy lasers—ablation has become more efficient; it is now the most commonly performed procedure for benign prostatic enlargement in the United States.