

## Anginal Equivalents: As simple as ABCDE

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### Abstract

This communication highlights the concept of anginal equivalents as an important symptom of cardiovascular disease in diabetes. The authors share two mnemonics, as simple as ABCDE, which can help identify atypical cardiovascular disease. Use of these learning tools should help improve early detection and management of cardiovascular disease.

**Keywords:** Angina, acute coronary syndrome, coronary artery disease, diabetes.

### THE BURDEN OF CARDIOVASCULAR DISEASE

Cardiovascular disease (CVD) is a common complication of diabetes, and it is a major contributor to premature mortality in a person with diabetes. Much of the burden of CVD can be minimized if it is detected and prevented in time<sup>1</sup>.

Current standards of care do not recommend routine invasive or stress based diagnostic modalities to diagnose underlying CVD in asymptomatic persons with diabetes mellitus<sup>2</sup>. This is because of a skewed risk benefit ratio. This means that the detection of CVD or institution of preventive pharmacotherapy (such as statins) is based upon clinical parameters.

While history taking and physical examination are an important and indispensable part of clinical medicine, they are quite subjective and person dependent. This means that the chances of misdiagnosis (both under and over identification) of CVD may be significant. In recent years, evidence based risk stratification tools have been developed to assess CVD risk, and validated scoring systems are available to screen for heart failure<sup>3-5</sup>. These have helped bring objectivity to the clinical assessment of CVD.

### THE BURDEN OF ATYPICAL CARDIOVASCULAR DISEASE

However, there is a significant proportion of persons with diabetes and CVD, who do not present with overt or

classic symptomatology of angina. Due to multiple reasons, including autonomic neuropathy and transient congestive cardiac failure, persons with diabetes may suffer from 'silent' myocardial infarction<sup>6,7</sup>. Such persons do not report typical chest pain or discomfort which worsens on exertion. However, detailed questioning reveals subtle clues which suggest CVD.

### ANGINAL EQUIVALENTS

Such historical clues are known as anginal equivalents. Stern et al have<sup>8</sup> evocatively described these as 'the sounds of silence'. Included in the list are dyspnoea, palpitations, fatigue, erectile dysfunction and genetics (family history). In fact, isolated typical angina pain is found in a minority of patients with ST segment deviation, with the most common symptom being dyspnoea<sup>9</sup>. Involvement of other vascular beds, as in erectile dysfunction, is also known to be an indicator of CVD in diabetes<sup>10,11</sup>.

We share two simple mnemonics, meant to simplify angina equivalents in acute as well as chronic settings (Table 1, 2). Both aim to make identification of CVD equivalents as simple as ABCDE. We appreciate that the symptoms and conditions listed here are not specific to CVD, and that they may have unrelated etiologies. The rubrics are not validated scoring systems or means for risk stratification, either. However, we share them as learning tools, and as aids to improve clinical assessment of persons with potential CVD.

**Table-1:** Anginal equivalents in acute setting\*

Atypical site pain  
Breathlessness  
Clamminess of skin / Diaphoresis  
Dry mouth  
At Exertion/ Exercise  
**\*symptoms suggestive of acute coronary syndrome**

**Table-2:** Anginal equivalents in chronic setting\*

Arrhythmias  
Biochemical abnormalities  
Claudication  
Dizziness  
Erectile dysfunction  
**\*symptoms suggestive of myocardial or polyvascular bed involvement**

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