

## ‘Get The Patient in a Good Light’: The Role of the Physical Examination in Modern Medical Practice

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### 1. Pull-Out Quotes

1. [There is] a growing perception that the traditional bedside assessment is of increasingly limited value in modern medical practice.
2. Indiscriminate use of investigations is not necessarily beneficial for either patient outcomes or the optimal distribution of finite healthcare resources.
3. The advent of the coronavirus pandemic has led to the rapid adoption of ‘telemedicine’
4. [Telemedicine] will never fully substitute for the personal commitment between doctor and patient resulting from a direct physician-patient interaction.
5. We advocate a holistic approach...with prudent use of technology being guided by a comprehensive history and physical examination

Historically, a thorough clinical assessment was believed to be sufficient to make a diagnosis. This is reflected in the requirement of students and trainees to demonstrate competence in history taking and physical examination to obtain medical degrees and post-graduate diplomas. However, the widened availability of investigations has led to a growing perception that the traditional bedside assessment is of increasingly limited value in modern medical practice.

However, the traditional clinical assessment need not be ‘pitted against’ modern investigations. Rather, we believe that expertise in the former may enhance utility of the latter, such that clinicians who are skilled at the bedside examination will make better and more judicious use of diagnos-

tic tests. Importantly, patient-doctor encounters can elicit unsuspected but informative details that profoundly influence the investigation and management pathway.

We have all encountered such cases. A recent example from our own practice involved the use of cardiac auscultation leading to the expedient diagnosis of a life-threatening pathology.

A middle-aged male presenting to his general practitioner with a new headache was prescribed corticosteroids and referred to the Rheumatology clinic for evaluation of suspected giant cell arteritis. Prior to clinic the patient attended the emergency department following an episode of chest pain. Because the electrocardiogram and bloods were unremarkable, the patient was diagnosed with dyspepsia secondary to corticosteroids and discharged. By the time of clinic, the patient’s headache had resolved but he reported mild breathlessness on exertion. Clinical examination revealed an early diastolic murmur in the aortic area suggestive of aortic regurgitation. There was no radial-radial or radio-femoral delay, nor was there a differential blood pressure between arms. However, an urgent CT-aortogram revealed a Stanford A type aortic dissection (Figure 1). The patient was swiftly transferred to the local Cardiothoracic Surgery unit and has since made a good recovery.

The diagnosis of aortic dissection, presenting atypically as subacute chest discomfort rather than classical ‘tearing’ chest pain, required a high level of clinical suspicion increased by the finding of an early diastolic murmur. The murmur was detected only as part of a thorough clinical assessment for chest pain, thereby demonstrating the enduring relevance of a 19<sup>th</sup> century physical examination techniques in the practice of 21<sup>st</sup> century medicine.



**Figure 1:** CT aortogram. Arrows Demonstrate the intimal flaps in both the ascending (double arrows) and descending (single arrow) aorta. TL denotes the ‘true lumen’ as this has contrast in it, where the false lumen FL does not. The true lumen (TL) and false lumen (FL) can be differentiated by the presence or absence of contrast media, respectively.

This example does not downplay the utility of modern investigations. Advancements in diagnostic technology have undoubtedly improved the delivery of health care. For example, cross-sectional imaging allows the timely and accurate diagnosis and staging of cancers. This in turn enables clinicians to make expedient management decisions. Meanwhile tumour- and patient-specific molecular analyses can determine a cancer subtype beyond the scope of a clinical assessment to guide targeted, and in some cases personalised, therapy.

However, there is a danger that increasingly available new technology will become overused, possibly at the expense of a full clinical assessment. Indiscriminate use of investigations is not necessarily beneficial for either patient outcomes or the optimal distribution of finite healthcare resources. For example, costs aside, inappropriate imaging unnecessarily exposes patients to additional radiation and risks harm from diagnostic and therapeutic interventions that may arise following identification of unexpected lesions which often turn out to be incidentalomas. Incidental imaging abnormalities are not uncommon; in a recent meta-analysis, the percentage of patients with a detected incidentaloma was as high as 45%, depending on the imaging modality and organ examined [1]. Radiation from CT has been estimated to account for 2% of all cancers in the United States [2]. Clearly, when an investigation offers a more definitive or informative diagnosis than clinical assessment alone, it should be performed. However, in our experience, doctors increasingly use modern investigations ‘defensively’ in the absence of a ‘hard’ indication. In such cases, we postulate that the tests are conducted firstly to reassure the clinician that the correct diagnosis was made, secondly to satisfy patient expectations, and thirdly as a safety measure against potential future malpractice claims.

Additionally, although it has been asserted that ‘relying on clinical examination is dangerous’ [3], insufficient focus on the physical examination may equally lead to harm. According to the Institute of Medicine’s report, “To Err is Human,” medical errors result in 98,000 deaths each year [4]. The error of omission was highlighted as one such source of error. In a survey of 208 physicians, as many as 63% of clinical errors were related

to failure to perform an adequate examination [5]. Poor physical examination skills risk injudicious referrals, investigations and ultimately suboptimal patient management.

The advent of the coronavirus pandemic has led to the rapid adoption of ‘telemedicine’ i.e. the use of telecommunication technology to provide medical information and services. Remote healthcare’s recent rise to prominence is understandable: a person with possible COVID-19 symptoms can be rapidly evaluated by a clinician via video link, without the risk of exposing other patients in the waiting room or the health-care workers who attend to them. Traditional concerns about technical barriers, security concerns and lack of widespread access notwithstanding, it seems likely that telemedicine will be here to stay even after lockdown measures are lifted. However, there is a limit to what telemedicine can do. It will never fully substitute for the personal commitment between doctor and patient resulting from a direct physician-patient interaction. Most importantly, as our case demonstrates, removing physical examination from the consultation may result in important errors with potentially fatal consequences.

Clinical assessment is not a perfect tool and neither are any of its components. Equally the indiscriminate use of technology does not result in cost-effective or high-quality patient care. Instead we advocate a holistic approach to the diagnostic process, with prudent use of technology being guided by a comprehensive history and physical examination. In this information age of increasingly advanced and available investigative technology, where the smartphone is as integral as the stethoscope to medical practice, it is important that clinical training remains clearly focused on the patient. In the words of Sir William Osler:

*“Get the patient in a good light. Use your five senses. We miss more by not seeing than we do by not knowing.”*

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