Working with e-panoramas

Discovering diagnostic landscapes!

A method to guide in situation of difficult diagnostic challenges in a structured, rational and conceivable way

INSTITUTE OF TROPICAL MEDICINE ANTWERP

INTRODUCTION

One of the most important jobs of a practicing clinician is to make the difference between patients who are seriously ill and those who are not, between those who need urgent medical care and those who do not. 'Missing' a severe case is a dreadful prospect for any doctor. This fear can easily lead to medical overconsumption. We want to propose a method to guide us in this difficult diagnostic challenge in a structured, rational and conceivable way. This is especially important in limited-income settings, where overconsumption is not quite an option.

The strategy we will follow is not entirely unrelated to the one used in 'mind mapping,' in which complex ideas are visually represented by orderly clustering them around a central theme. We want our diagnostic landscape to include the following information about a specific clinical presentation: possible diagnoses, whether they are 'important and treatable,' how we can confirm or exclude them, and which diagnoses have similar presentations.

STEP BY STEP

1. The central symptom of finding

After listening carefully and respectfully to the patient, we must define our panorama's 'key' or central finding. This is not necessarily the presenting complaint! Since we will focus on severe and treatable diseases first, we look for a complaint that points to one or more of these diseases. We place this key symptom or finding central in our panorama.

2. Construst the inner circle of diseases

As mentioned before, not all diseases are equally 'important.' Two crucial criteria should guide us in prioritizing diseases not to be missed: seriousness and the possibility to treat the disease. Only serious diseases that we can treat in the setting in which we are active are important to keep in immediate consideration. We place these diseases in a circle around the presenting symptom or finding.

3. Create segments and ars with shared findings

Inside the circle with diagnoses, we construct an arc that connects diseases through a finding that several of our possible diseases have in common, or we create a segment with diagnoses with shared findings. We arrange our circle, putting these diseases with shared findings together. In this way, diseases that 'look alike' are visually represented close to each other. This will help us quickly orient towards or away from some diseases.

4. Fill in other findings with each diagnosis

We can now put additional confirming findings around each diagnosis on the first circle. Clinical, radiological or laboratory values are discriminative if they have a strong or very strong confirming or excluding power. The presence of a confirmer will guide us toward a particular diagnosis, and the absence of an excluder will lead us toward rejecting a diagnosis.

For example, petechiae are rare in the case of meningitis, but if they are present, they have a strong confirming power. The absence of petechiae will not lead us to reject the possibility of meningitis. The presence of fever will not have a strong confirming power when we think of typhoid fever since many diseases are present with it; on the other hand, its absence will make typhoid fever very unlikely.

When we have several diagnostic possibilities, the added strong findings will also guide us in which symptoms or signs we must look for or which radiological or laboratory examinations to order.

5.Construct the outer circle

The diseases that are possible explanations for the presenting complaint but are not important in a specific setting are put in the outer circle. These should all be diseases that are either not serious or not treatable. This outer circle should only be considered when we take a 'second look' at a case, never in the primary assessment. In some settings, for example, when the workload is very high, we can forget about the second circle.

CONCLUSION

Panoramas are a way to visualize a differential diagnosis in a snapshot, taking into account priorities. Panoramas guide clinicians to focus on inner circle diseases and help clinicians not to overlook important diagnoses. A good panorama visually clusters diseases with strong shared confirmers and suggests further testing with wisely chosen additional confirmers or findings. The exercise of drawing a panorama can serve as a pedagogical method.

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