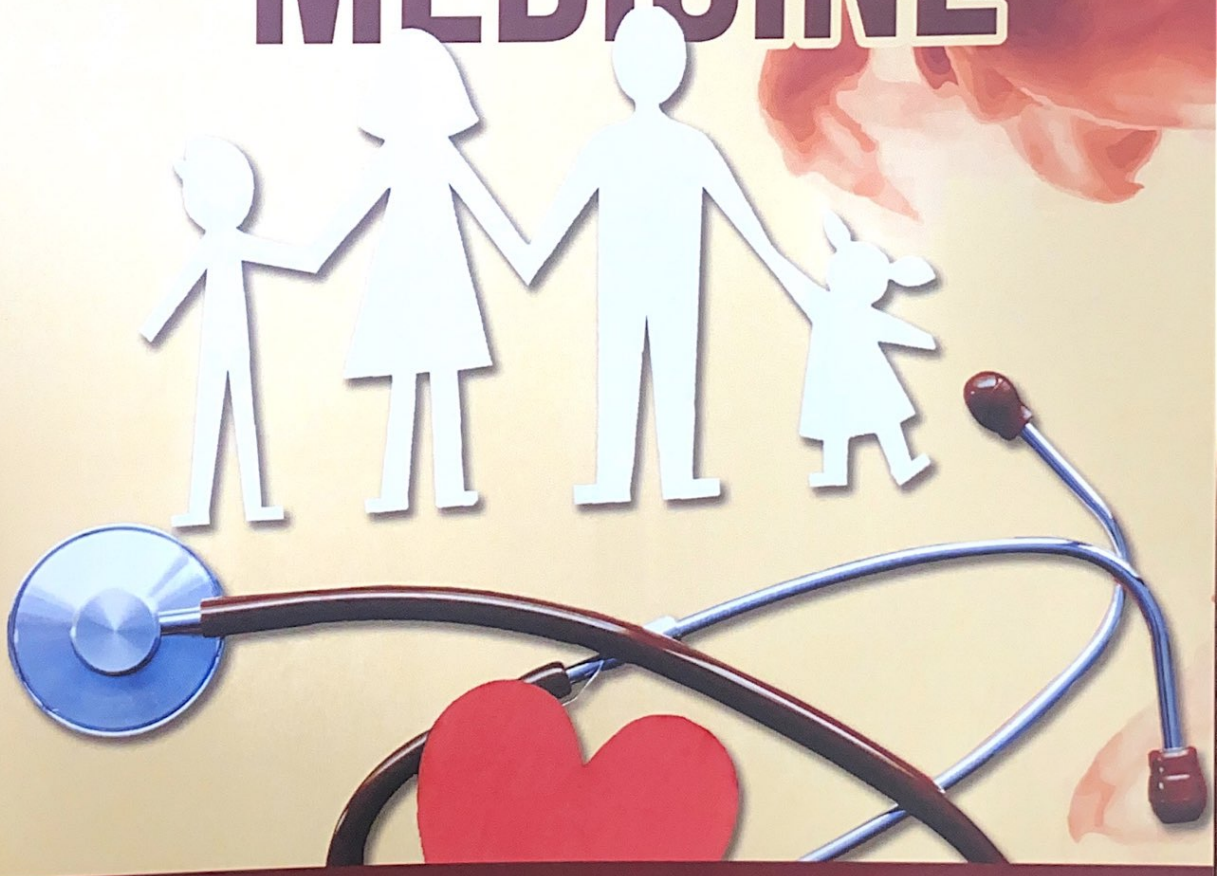
ESSENTIAL CASE STUDIES IN FAMILY MEDICINE



Editors:
Mohd Radzniwan A. Rashid | Fathima Begum Syed Mohideen
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USIM Press
Universiti Sains Islam Malaysia
Bandar Baru Nilai
Negeri Sembilan
2022

First Published in 2022

Published in Malaysia by:

USIM PRESS
Universiti Sains Islam Malaysia
71800 Bandar Baru Nilai
Negeri Sembilan Darul Khusus
Tel: +606-798 6271/6272 | Fax: +606-798 6083
www.penerbit.usim.edu.my
penerbit@usim.edu.my

USIM Press is a member of the
MALAYSIAN SCHOLARLY PUBLISHING COUNCIL (MAPIM)

Printed in Malaysia by:

PEWARIS GEMILANG SDN BHD
No. 27G, Jalan Putra 8,
Taman Putra Kajang,
43000, Kajang, Selangor
Tel: +03-8741 5215
pewaris.hr@gmail.com

National Library of Malaysia Cataloguing-in-Publication Data

Essential Case Studies in Family Medicine / Editors: Mohd Radzniwan A. Rashid, Fathima Begum Syed Mohideen, Sharifah Najwa Syed Mohamad, Nurul Hayati Chamhuri.
ISBN 978-967-0001-32-6
1. Family medicine--Case studies.
2. Primary care (Medicine)--Case studies.
3. Medical care--Case studies.
4. Government publications--Malaysia.
I. Mohd Radzniwan A. Rashid. II. Fathima Begum Syed Mohideen.
III. Sharifah Najwa Syed Mohamad. IV. Nurul Hayati Chamhuri.
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Case 20:
PALPITATIONS IN A YOUNG MAN

By Nurjasmine Aida Jamani

A 28-year-old man presents with palpitation associated with intermittent headache for the past six months. He also has difficulty in sleeping, muscle aches, feeling stressed and exhausted throughout the day. These symptoms have been worsening for the past one month. For the past two weeks, he has been having frequent awakening from sleep because of chest pain. There is no loss of appetite or weight. He works as a graphic designer and has been having persistent worry about his work. He could not focus on his work and has been taking frequent leaves. He has no medical illness.

On examination, he looks anxious but has good eye contact. His blood pressure is 140/70mmHg with a regular pulse rate of 90 bpm. There are no hand tremors, palm sweating, or lid lag noted on eye examination. His cardiovascular and other system examinations are unremarkable.

Questions

Q1. List FOUR (4) differential diagnoses for the above scenario.
Q2. State the most likely diagnosis and your reason.
Q3. State investigations you would perform.
Q4. Outline the management for this patient.

Model Answers

Q1. List FOUR (4) differential diagnoses for the above scenario.

Answer:

The followings are the four differential diagnoses:

a) Thyrotoxicosis
b) Depressive disorder
c) Generalised anxiety disorder
d) Pheochromocytoma

Further Notes and Explanation

In the above case scenario, a few differential diagnoses need to be ruled out. The patient above presents with multiple somatic symptoms such as tiredness, headaches, palpitation, muscle aches and chest pain. Therefore, it is important to rule out endocrine and cardiovascular causes for this patient.

In view that he has palpitation, intermittent headaches and feeling lethargic, thyrotoxicosis should be listed as a differential. Thus, other symptoms of hyperthyroidism such as losing weight despite good appetite, heat intolerance, proximal myopathy, tremors, sweaty palms, and thyroid swelling need to be explored. While on examination, the signs such as sweaty palms, tremors, atrial fibrillation, eyes signs and thyroid swelling need to be elicited. However, in this patient, he has no other symptoms and signs suggestive of hyperthyroidism which makes it less likely.

Depressive disorder is one of the important differential diagnoses. Depression may occur concurrently with anxiety. Nonetheless, anxiety disorders generally can be distinguished from depressive states. In anxiety states, increased vasomotor responsiveness together with panic attacks, phobias, derealization, and perceptual dysfunctions are frequently seen in patients. While in depression, the mood and affect are usually low, associated with loss of interest and pleasure (anhedonia), hopelessness, guilt, and emotional

withdrawal. In contrast, the duration of these two diagnoses differs from each other.

Generalized anxiety disorder (GAD) is a diagnosis of exclusion. The symptoms can mimic other causes of palpitations, headaches and feeling tired. These are called somatic symptoms. Usually in GAD the physical examination is normal.

Pheochromocytoma is another organic cause that needs to be considered. The classic clinical presentations are severe hypertension associated with headaches, palpitations, and diaphoresis. These symptoms usually get worse over time as the tumour increases in size. Like in this patient, he has palpitation, headaches and his blood pressure is in the borderline reading. Blood pressures need to be repeated including serial measurement in order to rule out pheochromocytoma.

Q2. State the most likely diagnosis and your reason.

Answer:

The most likely diagnosis is generalized anxiety disorder (GAD). The point for this diagnosis is the duration of the symptoms, excessive worry with poor concentration in work, easily tired and having sleep disturbance. His physical examination is normal with no other attributable cause of his symptoms. Somatic symptoms that he exhibit which are palpitations, feeling tired, difficulty sleeping, excessive worry which affected his daily living met the criteria of diagnosing GAD based on DSM-V criteria which is listed in Table 3:

Table 3: DSM-V criteria for Generalized Anxiety Disorder

1. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least six months, about a number of events or activities (such as work or school performance).
2. The individual finds it difficult to control the worry.
3. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past six months):

   Note: Only one item required in children.

   a) Restlessness, feeling keyed up or on edge.
   b) Being easily fatigued.
   c) Difficulty concentrating or mind going blank.
   d) Irritability.
   e) Muscle tension.
   f) Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep).

4. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
5. The disturbance is not attributable to the physiological effects of a substance (e.g. a drug abuse, a medication) or another medical condition (e.g. hyperthyroidism).
6. The disturbance is not better explained by another medical disorder (e.g. anxiety or worry about having panic attacks in panic disorder, negative evaluation in social anxiety disorder [social phobia], contamination or other obsessions in obsessive-compulsive disorder, separation from attachment in separation anxiety disorder, reminders of traumatic events in posttraumatic stress disorder, gaining weight in anorexia nervosa, physical complaints in somatic symptom disorder, perceived appearance flaws in body dysmorphic disorder, having a serious illness in illness anxiety disorder, or the content of delusional beliefs in schizophrenia or delusional disorder).

Further Notes and Explanation

Generalized anxiety disorder (GAD) is one of the anxiety disorders. It is a relatively common disorder, most often with onset during adulthood and a chronic course. GAD can lead to significant impairments in role functioning, diminished quality of life, and high healthcare costs.

It is characterized as excessive and persistent worrying that is difficult to control causing significant distress with impaired quality of life which occurs most days at least for six months. GAD is one of the commonest mental health illnesses encountered in the primary care settings and mostly seen in females and elderly population.

GAD tends to be long standing and may co-exist with other types of anxiety disorder and depression. Diagnosing GAD in primary care can pose a challenge to the attending physician. A few screening tools with good reliability and validity can help in screening such as Generalized Anxiety Disorder -7 item scale (GAD-7), Hospital anxiety and Depression (HADS) or Depression Anxiety Stress scale (DASS-21). Diagnosis is based on DSM-V as shown above.

Q3. State investigations you would perform.

Answer:

In view that Generalised Anxiety disorder is a diagnosis of exclusion, baseline investigations need to be done such as:

a) Full blood count in order to rule out anaemia as a cause for palpitation
b) Electrocardiogram (ECG) to rule out cardiac arrhythmia such as atrial fibrillation
c) Thyroid function test to rule out hyperthyroidism.

Further Notes and Explanation

In patients presenting with psychiatric symptoms such as anxiety or depression, organic causes should be ruled out first. This is because there are medical conditions that can present with psychological disturbance as their first manifestation.

For instance, such as in this case, sending a full blood count can give a general information on the health status of a patient since anaemic symptoms can manifest as palpitations. Nonetheless, an ECG is useful to rule any cardiac arrhythmia in patients presenting with palpitations. Since hyperthyroidism can present with fatigue, palpitations and sleep disturbance, a thyroid function test is warranted.

Q4. Outline the management for this patient.

Answer:

The management would depend on further history, physical examination and investigation obtained. Once the diagnosis is confirmed, patients with Generalized Anxiety Disorder should be offered with education on the disease, psychological interventions, and pharmacological agent. For patients who have marked functional impairment like in this case where he has sleep disturbance and absence from work, he can be treated with an antidepressant agent such as Selective Serotonin Reuptake Inhibitor (SSRI). Examples of SSRI are sertraline, fluoxetine, and escitalopram. A short course of benzodiazepines may also be helpful for acute management of anxiety and worry during the period before selective serotonin reuptake inhibitors (SSRIs) take effect. For his difficulty in sleeping, sleep hygiene advice can be given.

Further Notes and Explanation

Sleep hygiene education is recommended as the initial treatment for patients having sleep disturbance. It is part of behaviour therapy which can be started alone or in combination with pharmacological therapy.

Sleep hygiene helps patients to shape their sleeping habits into a healthy one.

Table 4: Sleep hygiene practices

During daytime	Before bedtime
1. Take short naps during the day. 2. Perform exercise regularly	1. Maintain a regular bedtime schedule 2. Avoid caffeinated beverages 3. Avoid alcohol and smoking near bedtime 4. Avoid going to bed in hunger. 5. Adjust bedroom surroundings- turning off the lights, tone down noise and ensure the temperature is comfortable 6. Avoid prolonged use of light emitting screens such as phones or reading from gadgets (e-books) before bedtime. 7. Attend to concerns or worries before bedtime

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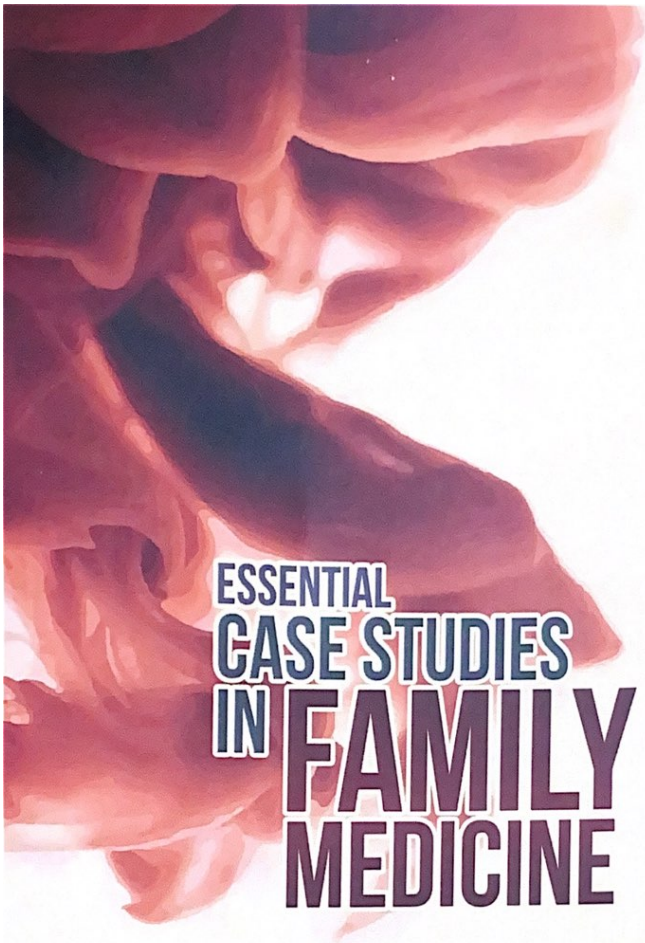

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Family medicine or primary care plays a large role in being the gatekeeper of health care delivery in many countries. Areas covered by the primary health care provider include disease prevention, health screening for early detection of disease, risk stratification of diseases, promoting curative care as well as rehabilitation services. This requires a strong foundation, with good quality clinical skills and knowledge in managing a spectrum of cases. Having said that, due to time and resource constraints in some settings, the cases discussed in this book can still appear to be very challenging to a primary care doctor despite being very common. Thus, it is hoped that this book can act as a guide for primary care practicing doctors as well as students newly exposed to the primary care setting.

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ISBN 978-967-0001-32-6
5600
9 789670 001326
http://penerbit.usim.edu.my