# Management in Family medicine

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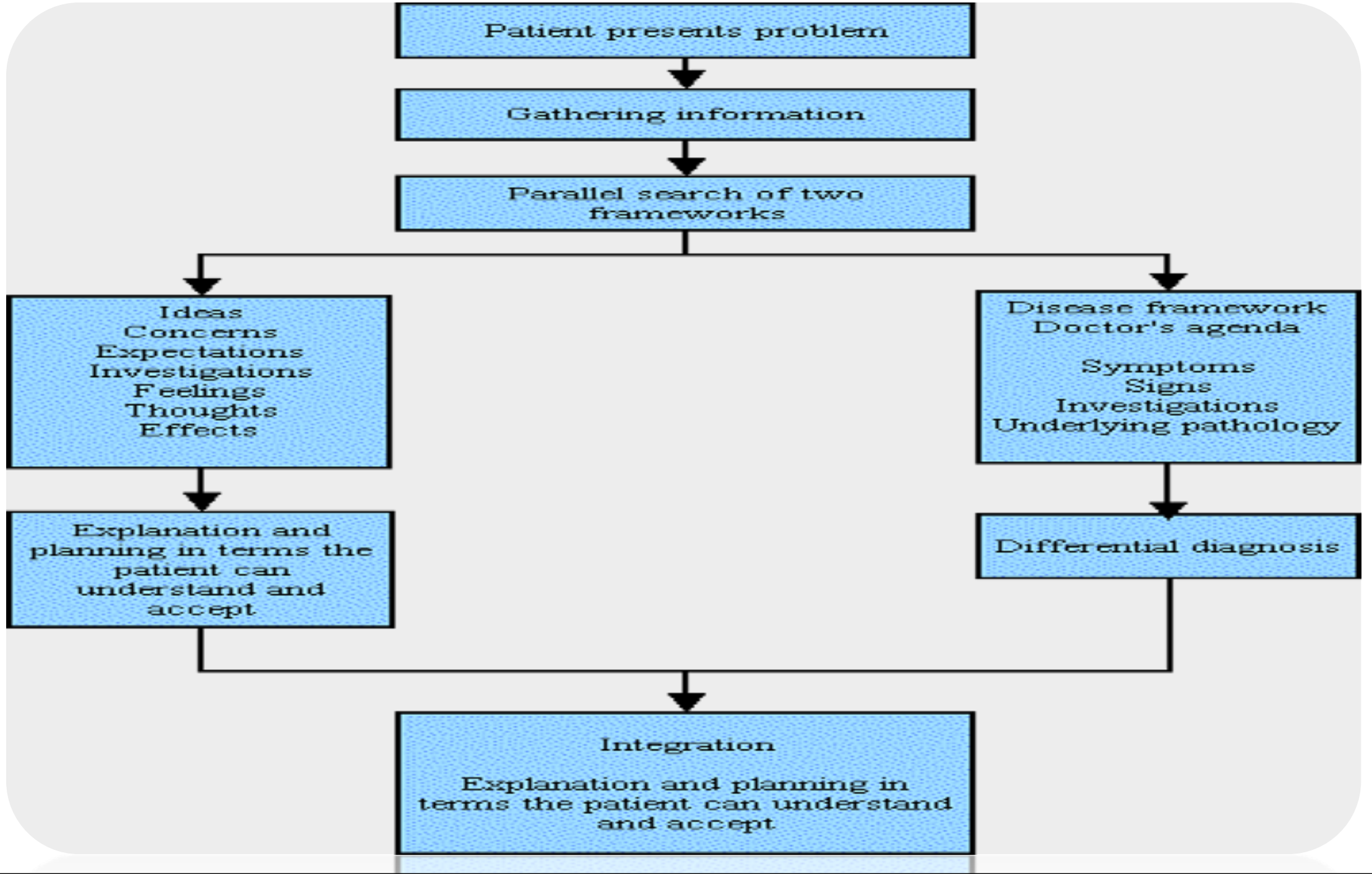
Dr. Farihan Barghouti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A 15-year-old girl has a history of acute difficulty breathing when playing basketball.

# Symptoms and signs

- **Her symptoms include inspiratory wheezing/stridor**
- **increased respiratory rate**
- **throat tightness, and chest discomfort.**
- **Premedication with adequate doses of albuterol has no effect.**

# Differential diagnosis

**What is the most likely diagnosis?**

**A-**Exercise-induced asthma.

**B-**Gastroesophageal reflux disease.

**C-**Musculoskeletal chest pain.

**D-**Hyperventilation.

**E-**Vocal cord dysfunction.

# Differential Diagnosis of Vocal Cord Dysfunction

Anaphylaxis

Angioedema

Asthma

Epiglottitis

Hypoparathyroidism

Laryngomalacia (in adults)

Laryngotracheobronchitis (croup)

Presence of foreign body

Tracheal stenosis

Vocal cord paralysis

Vocal cord tumors or polyps

**The correct answer is "E."**

# Why ??

In this patient, a $\beta_2$-agonist was ineffective, even though she displays symptoms with exertion. This argues against answer "A." The distinction between VCD and asthma may be less clear in other patients, since the two disorders sometimes coexist.

The clinical history does not support the diagnoses of gastroesophageal reflux disease, musculoskeletal chest pain, or hyperventilation

# Explanation

# Vocal cord dysfunction (VCD)

*Is one of the most common asthma mimics.*

**Symptoms**

Patients with VCD present with

- hoarseness, coughing, dyspnea, and loud **inspiratory wheezing/stridor**, along with other symptoms mentioned above.

# Precipitating Factors

**EXERCISE**

**PSYCHOLOGICAL CONDITION Studies** have reported associations between vocal cord dysfunction and multiple psychological conditions, including posttraumatic stress disorder, anxiety, depression, and panic attack.

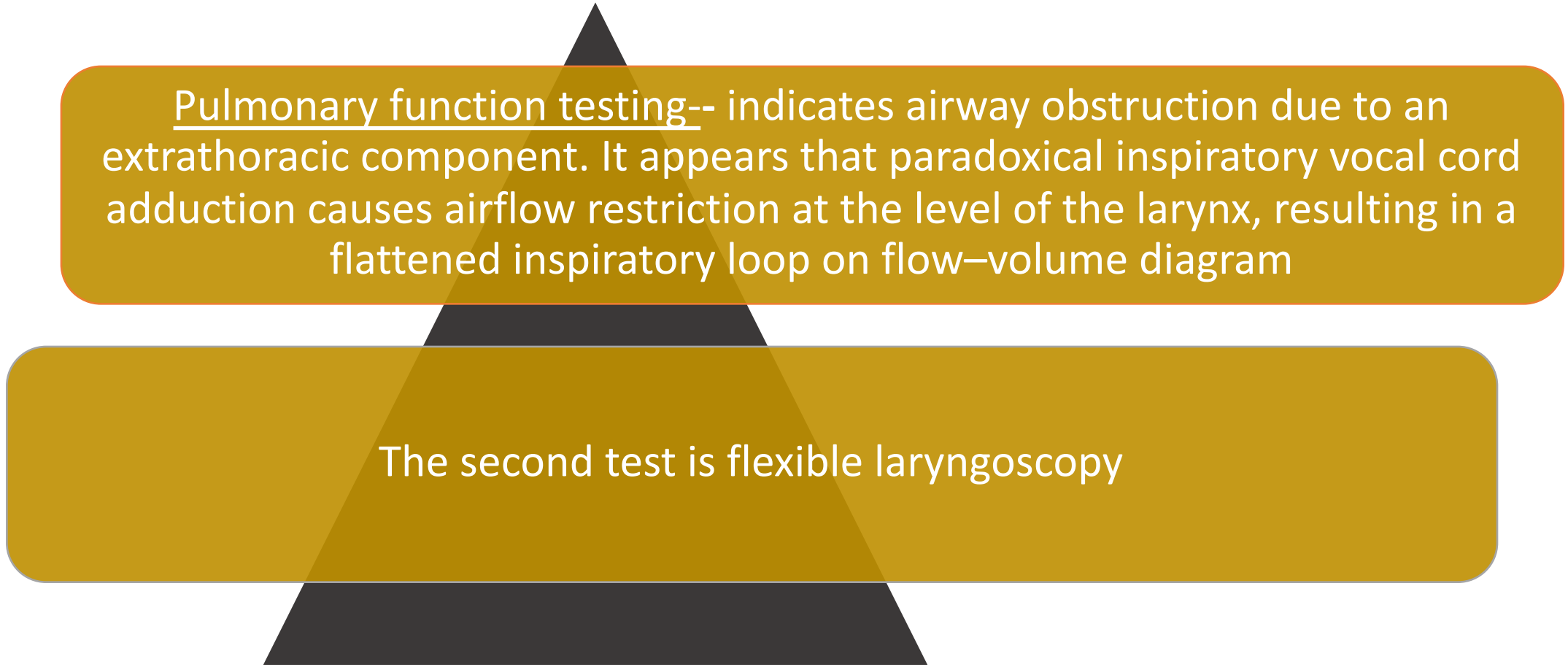
**IRRITANTS** Exposure to environmental and occupational irritants has been found to precipitate respiratory symptoms consistent with vocal cord dysfunction.

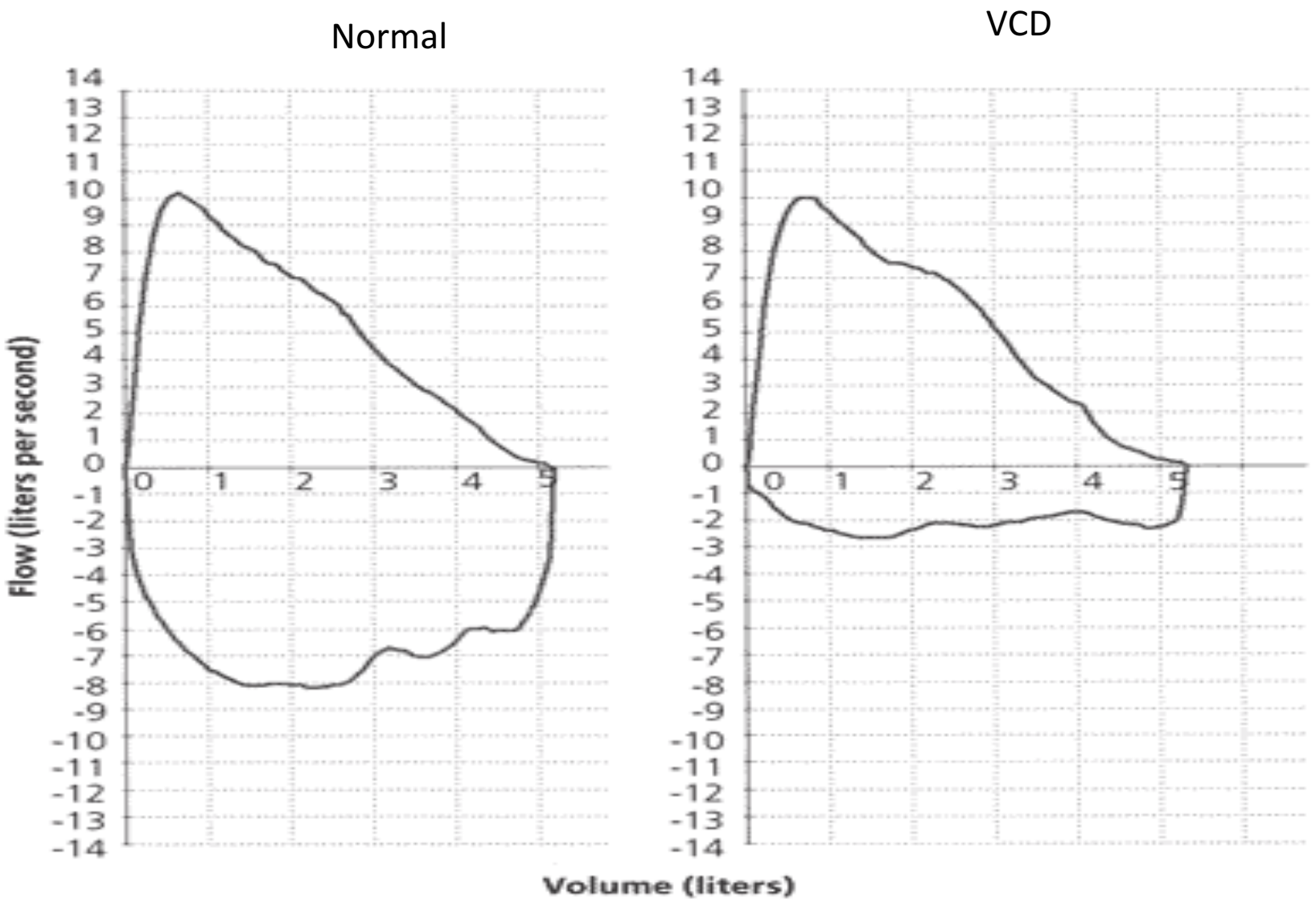
**RHINOSINUSITIS** Postnasal drip associated with rhinosinusitis has been linked to airway hyperresponsiveness.- A high prevalence of rhinosinusitis in patients with vocal cord dysfunction and case reports of resolution of vocal cord dysfunction symptoms with treatment suggest that rhinosinusitis may play a role in some patients.

**GASTROESOPHOGEAL REFLUX DISEASE**

**MEDICATION USE** Neuroleptic drugs, specifically phenothiazines,

# Investigation






Flow-volume loop. *(Left)* Normal expiratory and inspiratory loop. *(Right)* Normal expiratory loop with flattening of the inspiratory loop, consistent with vocal cord dysfunction.

VCD presents a diagnostic challenge, and often leads to unnecessary treatment of asthma.

| **Short-term** |
| --- |
| **Reassure patient** |
| **Instruct patient in breathing behaviors, including panting(**having the patient breathe rapidly and shallowly)**, diaphragmatic breathing, breathing through the nose or a straw, pursed-lip breathing, and exhaling with a hissing sound** |
| **Consider a trial of helium and oxygen (heliox) in patients with persistent or severe vocal cord dysfunction** |
| **Long-term** |
| **Avoid known triggers, such as smoke, airborne irritants, or certain medications** |
| **Treat underlying conditions, including anxiety, depression, gastroesophageal reflux disease, and rhinosinusitis** |
| **Consider a trial of inhaled ipratropium (Atrovent) in patients with exercise-induced symptoms** |
| **Referral for speech therapy is indicated in patients with unresolved symptoms** |
| **Long-term tracheostomy may be appropriate in severe, resistant cases** |

**Short- and Long-term Management of Vocal Cord Dysfunction**

# Treatment

The main treatment for VCD is speech therapy technique

Speech therapy techniques are usually taught by a speech therapist or psychologist who is trained and experienced in treating VCD.

# Management in practice 2

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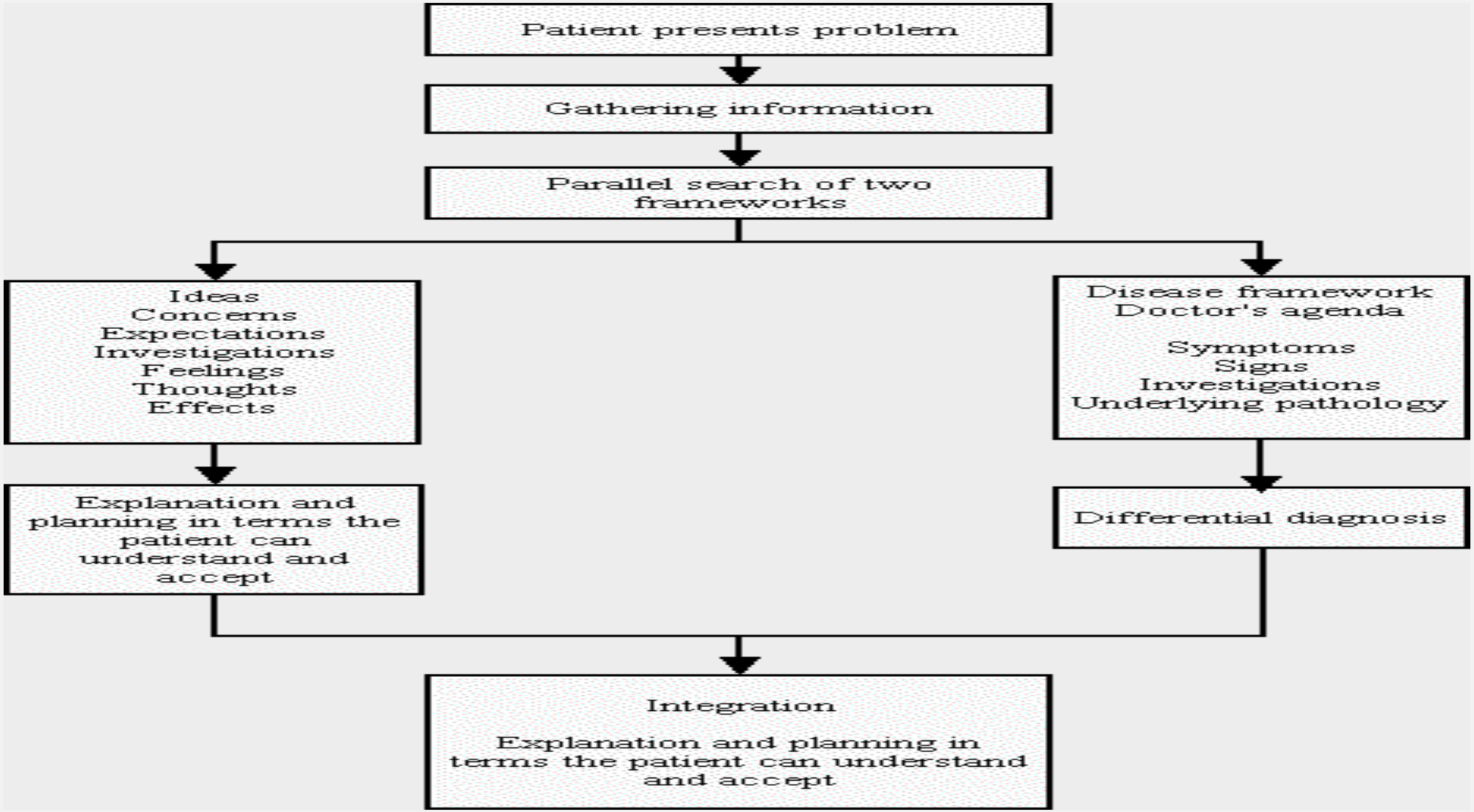
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# PRESENTING COMPLAIN AND GATHERING INFORMATION

You are seeing a new patient in your office. He is a 47-year-old man with a presenting complaint of fatigue for several months.

He denies fever, rigors, cough, nausea, or diarrhea.

He has lost about 4kg . Upon questioning him you discover that he is also having nocturia most nights and is thirsty all the time.

He has asthma, for which he uses salbutamol metered dose inhaler occasionally.

- Gathering information

he has no other chronic medical problems and takes no other medications on a regular basis.

He has a family history of diabetes, hypertension, and heart disease.

He smokes about one pack per day, and he works as a teacher at the local high school.

- **Physical examination and investigation**

**Physical examination reveals the following: T 37°C, BP 135/83 mm Hg, P 72 bpm, BMI 38 kg/m².**

**Aside from obesity, the remainder of the examination is normal.**

**Laboratory test results reveal the following: normal CBC, BUN/creatinine, and electrolytes.**

**You ask him to return to the office the next day for fasting laboratory tests, which reveal a fasting glucose of 123 mg/dL and an HbA1c of 7.5%.**

- **Does this patient have diabetes?**

**A-**Yes; he has an elevated fasting glucose.

**B-**Probably; he needs a second fasting glucose to confirm the diagnosis.

**C-**Probably; he needs a second HbA1c to confirm the diagnosis.

**D-**Yes; he has the classic symptoms of diabetes: fatigue, weight loss, and thirst, associated with an elevated glucose.

**E-**Probably not; his HbA1c is not >8%.

# THE CORRECT ANSWER IS **C**

# EXPLANATION

- If results of two different diagnostic tests for DM are discordant, the test that is diagnostic of diabetes should be repeated.
- "A" and "B" are incorrect because the fasting glucose is <126 mg/dL (the threshold for diabetes).
- "D" is incorrect because we do not have his random glucose value that is ≥200 mg/dL.
- "E" is incorrect because the A1c cutoff for diabetes diagnosis is ≥6.5%

- **Assuming another A1c is above 6.5%, what further study must be done to complete the diagnosis of diabetes and determine whether the patient has type 1 or type 2 diabetes?**

**A-**C-peptide level.

**B-**Anti-islet cell antibodies.

**C-**Anti-insulin antibodies

**D-**None of the above.

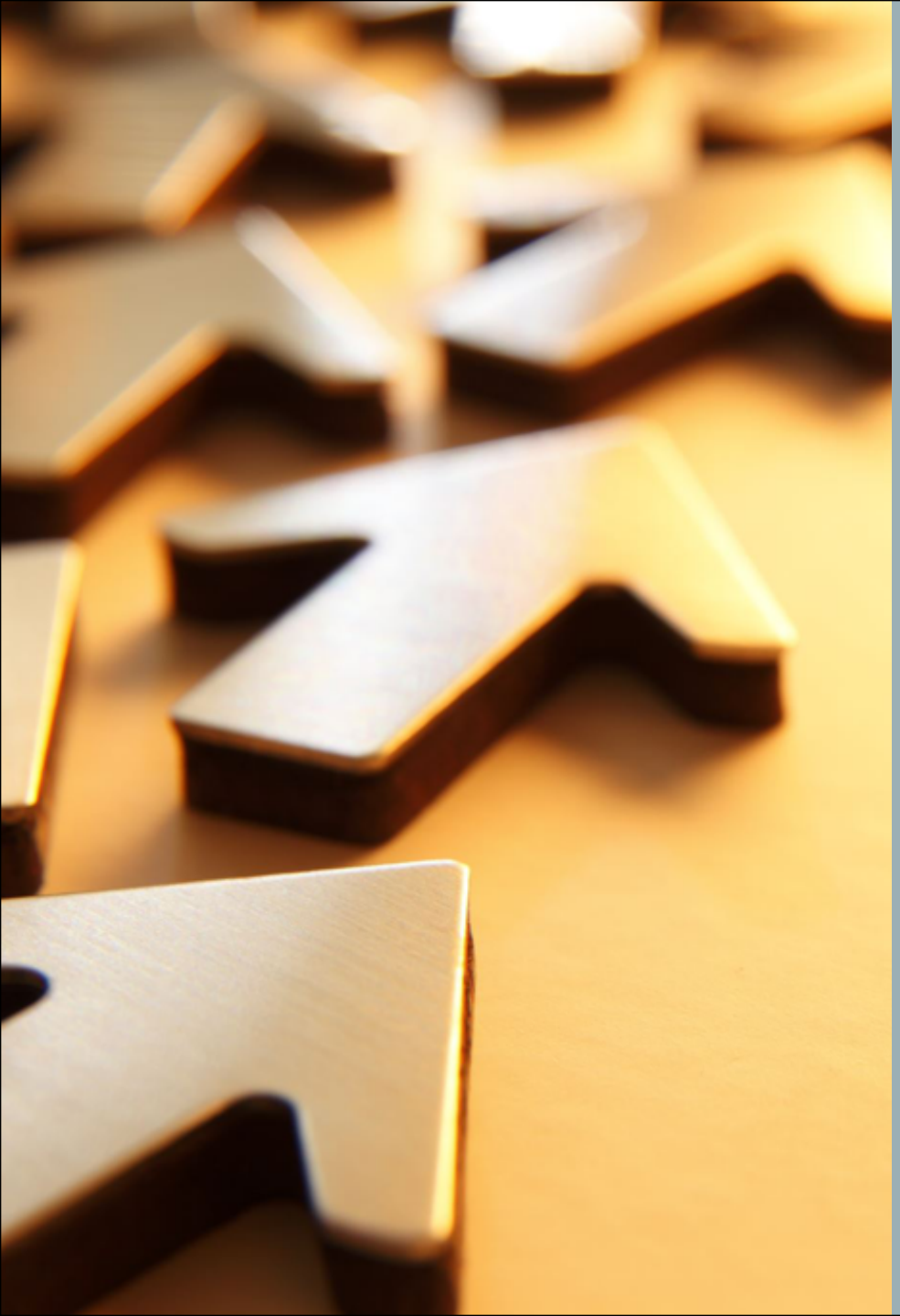
The correct answer is **D**

- **Given his age, body habitus, and lack of exercise, you feel certain that this patient has type 2 diabetes. You provide some basic education on the nature of diabetes, its natural history, and what can be done to manage it.**
- **What is the most important next step for this patient?**
- **A-**Initiation of insulin therapy.
- **B-**Initiation of an ACE inhibitor
- **C-**Referral to an endocrinologist.
- **D-**Diabetic education classes.
- **E-**Initiation of glyburide or other sulfonylurea.

# THE CORRECT ANSWER IS **D**

•Why

- A general education program that includes information on diet, disease management, and the family's role in successful diabetes care is the most important intervention listed.
- While specialist consultation may be useful in complex diabetic patients or in those who are not responding to treatment, generalist physicians provide care to the majority of patients with diabetes.
- Insulin therapy is not indicated at this point, and an ACE inhibitor may or may not be helpful depending on the patient's blood pressure and urine protein.
- "E" is also incorrect.



# FOLLOW UP

**•At the next visit, you review the patient's medical record and try to assure that he is up to date on his preventive health care.**

- **Which of the following is NOT true regarding preventive services in diabetics?**
- **A-**Patients diagnosed with type 2 diabetes should have a dilated eye examination at the time of diagnosis.
- **B-**Patients with type 1 diabetes should have a dilated eye examination at the time of diagnosis if they are over age 12.
- **C-**Check TSH annually in type 1 diabetes, in patients with dyslipidemia or diabetic women over age 50 years.
- **D-**A urine microalbumin should be checked at least yearly in all type 2 diabetics.
- **E-**A foot examination using a 10 g nylon microfilament should be done annually for all diabetics.

# THE CORRECT ANSWER IS **B**

•Explanation

Patients with diabetes type 1 should have an eye examination **3 to 5 years** after the diagnosis and then yearly.

Age at the time of diagnosis is not a factor in determining when an eye examination should be done.

# GUIDE LINES FOR FOLLOW UP

# DM TYPE I

Urine microalbumin starting at age 12 and then every 6 to 12 months.

Dilated eye examination 5 years after diagnosis and then annually.

HbA1c every 6 months for stable patients achieving glycemic goals, every 3 months for patients changing therapy or not meeting glycemic goals.

# DM TYPE 1

Blood pressure screening at every visit.

Foot examination and screening for polyneuropathy at diagnosis and annually.

If not performed/available within past year

- Fasting lipid profile, including total, LDL, and HDL cholesterol and triglycerides, as needed
- Serum creatinine and calculated glomerular filtration rate
- TSH in type 1 diabetes, dyslipidemia, or women over age 50 years.

- **DM type 2**

Same as DM1 above, except:

Eye examination at time of diagnosis and then yearly.

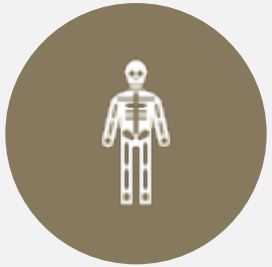
Urine microalbumin at the time of diagnosis and then every 6–12 months

**SPEAKING OF PREVENTION, YOUR PATIENT, NOW 48 YEARS OLD WITH HIS DIABETES CONTROLLED, ASKS IF HE SHOULD BE TAKING AN ASPIRIN DAILY TO PROTECT HIS HEART. YOU RESPOND:**

**A**"-Take aspirin 325 mg daily because it will lower your risk of myocardial infarction."

**B**"-Diabetes does not automatically qualify you for aspirin therapy. Let's check your atherosclerotic cardiovascular disease (ASCVD) score."

**C-**"The risks and benefits of aspirin in your case are unknown."



**D-**"Take it by the truckload. I've got a lot of stock in Bayer."

# THE CORRECT ANSWER IS **B**

## •Why

- The ADA recommends considering aspirin therapy (75–162 mg/day) as a primary prevention strategy in those with type 1 or type 2 diabetes at increased cardiovascular risk (10-year risk ≥10%).
- Who would be in this category of risk? Most diabetic men aged >50 years or diabetic women aged >60 years who have at least one additional major risk factor (family history of cardiovascular disease, hypertension, smoking, dyslipidemia, or microalbuminuria).

# ADA RECOMMENDS AGAINST ASPIRIN USE FOR CVD PREVENTION FOR ADULTS WITH DIABETES AT LOW CVD RISK

(10-year CVD risk <5%, such as in men aged <50 years and women aged <60 years with no major additional CVD risk factors) since the potential adverse effects from bleeding likely offset the potential benefits.

If you decide to prescribe aspirin for primary CVD prevention in a diabetic, use 81 mg daily.

# THANKS

# MANAGEMENT IN PRACTICE 3

DR. FARIHAN BARGHOUTI

# PATIENT 1

- **A 27-year-old female presents to the office with the chief complaint of chronic fatigue for 4 months. She has gained4 kg  in 3 months, despite a decreased appetite. She also complains of depression, increased sleep, lack of energy, hair loss, and cold intolerance. Her past medical history is unremarkable, and she takes no medications. She has never had any surgeries.**

- **Which of the following physical examination findings would be expected?**
- **A-**Tachycardia
- **B-**Exophthalmos
- **C-**Fine tremor
- **D-**Peripheral sensory loss
- **E-**Delayed relaxation in reflexes

# THE CORRECT ANSWER IS "E."

# WHY

- The history given is consistent with a hypothyroid state. Symptoms of hypothyroidism include thinning hair, dry skin, a hoarse and deep voice, bradycardia, and a prolonged relaxation in the reflexes.
- Tachycardia and a fine tremor are more typical of hyperthyroidism, and exophthalmos is characteristic of Graves' disease (one specific cause of hyperthyroidism). Proximal muscle weakness may occur in hypothyroidism, but sensory loss is not typical (although hypothyroidism, diabetes, gout, rheumatoid arthritis, obesity, and connective tissue disorders can contribute to carpal tunnel syndrome which may be the initial presenting symptom of these diseases).

# HOW CAN THE DIAGNOSIS OF HYPOTHYROIDISM BEST BE CONFIRMED?

- **A-**Elevated thyroid-stimulating hormone (TSH) level
- **B**L-ow TSH level
- **C-**Thyroid biopsy
- **D-**Radionuclide scan
- **E-**Serum thyroglobulin

# THE CORRECT ANSWER IS "A."

- The TSH is the most sensitive test for both hypo- and hyperthyroidism, and changes in the TSH can precede abnormalities in serum thyroxine (best measured as free T4) level. An elevated TSH occurs when the pituitary detects insufficient thyroid hormone production (low free thyroxine), and TSH production is shut off when the pituitary detects an excess of thyroid hormone circulating (elevated free thyroxine

- TSH alone is usually sufficient for initial screening for thyroid disease.

"C," a biopsy, is used to evaluate thyroid masses and nodules.

A radionuclide scan ("D") is also used in the evaluation of thyroid masses and can (mostly) differentiate functioning adenomas from carcinomas and benign cysts.

"E," the serum thyroglobulin measurement, is used to **monitor** thyroid carcinoma (and is *not* the initial screening).

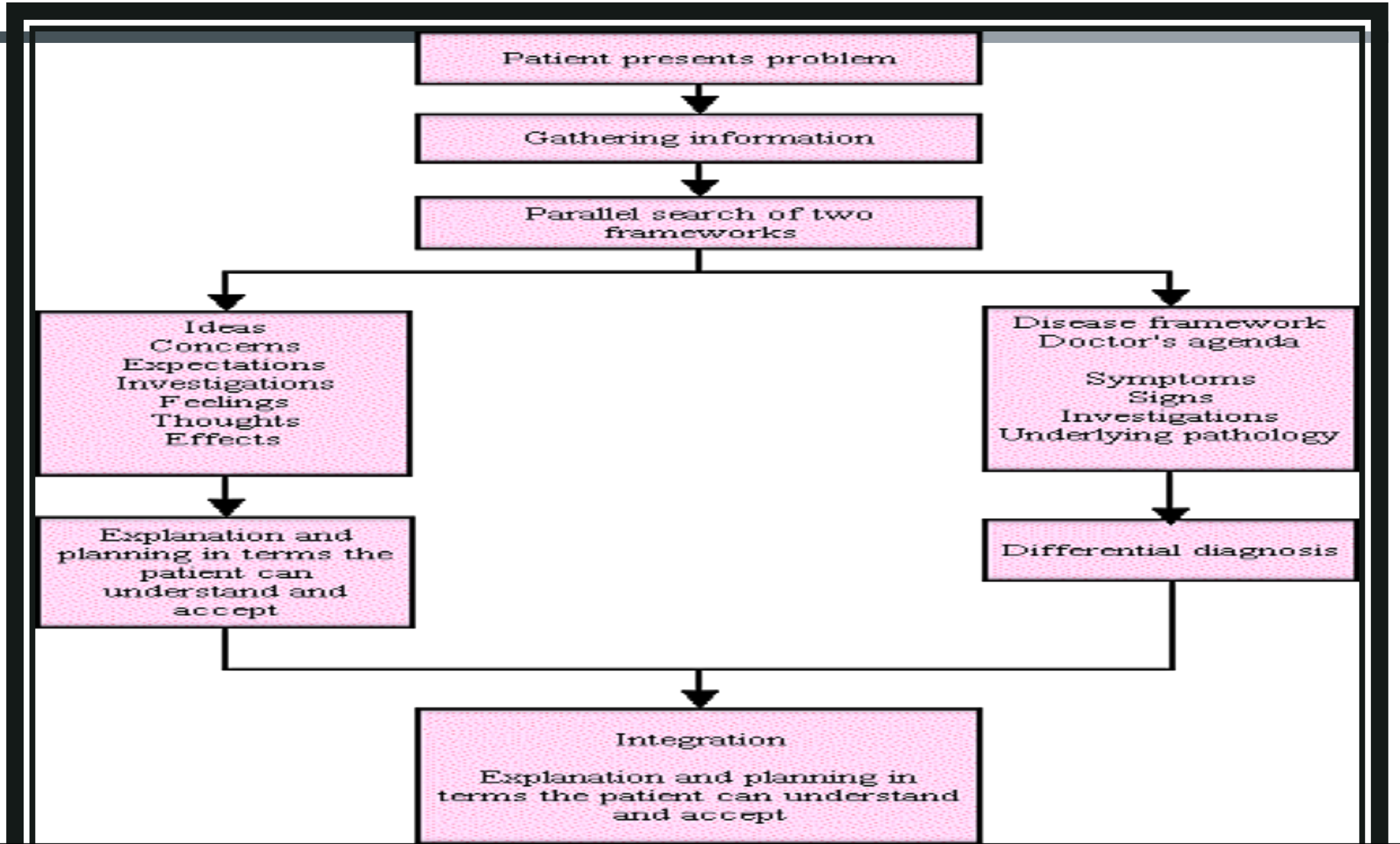
- **Her laboratory results are normal except for glucose 115 mg/dL, TSH 22.3 μIU/mL (reference range is typically 0.27–4.20 but may vary per lab), free T4 0.56 ng/dL (reference range typically 0.93–1.70).**

# BASED ON PREVALENCE, LABS, AND PRESENTATION, WHAT IS THE MOST LIKELY CAUSE OF THIS PATIENT'S DISEASE?

- **A-**Autoimmune hypothyroidism
- **B-**Iatrogenic hypothyroidism
- **C-**Tuberculosis infiltration of the thyroid gland
- **D-**Nonfunctioning pituitary adenoma
- **E-**Congenital hypothyroidism

# THE CORRECT ANSWER IS "A."

- " Autoimmune hypothyroidism (Hashimoto thyroiditis) is the most common cause of hypothyroidism in areas where there is adequate iodine
- If this patient had a pituitary adenoma causing hypothyroidism, the TSH (as well as the free T4) would be low, since the pituitary is the source of TSH.
- Congenital hypothyroidism causes a severe developmental delay and a constellation of other signs and is tested for at birth as part of routine neonatal screening. Tuberculosis is a rare cause of hypothyroidism, but is the most common cause of **adrenal** failure worldwide.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# Patient’s management 4

# Goals

**Tasks of consultation**

**Patient presenting with a problem**

**Doctor agenda**

**Patient agenda**

**End of consultation**




# Tasks to be achieved in the consultation

1-Management of presenting problem

2-Management of continuing problem

3-Modification of help seeking behaviour

4-Opportunistic health promotion

# Patient presenting with a problem

A 32 of age  female patient presenting to you with left heel pain , started 3 weeks ago when she began working out to lose weight .

Her past medical history is unremarkable

How do you manage ?

# The presenting problem




# Content

## Doctor agenda

- History taking
- physical examination
- Differential diagnosis
- Investigation
- Treatment
- Referral

## Patient agenda

- **Ideas and believes**
- **Concerns and worries**
- **Expectations for now and future**

# Differential diagnosis

| Origin of heel pain | musculoskeletal | vascular | dermatological | neurological |
|---|---|---|---|---|
| | Planter fasciitis | Peripheral arterial disease | Planter verruca | Tarsal tunnel syndrome |
| | Stress fracture | Vascular insufficiency | Ulcers | Medial or lateral planter neuritis |
| | Bone cyst | | Foreign body | |
| | Calcaneal stress fracture<br><br>Achilles tendinitis | | | |

# Clinical finding

## Epidemiology

- *Plantar fasciitis is the most common cause of heel pain.*
- Each year, an estimated 2 million Americans are affected, resulting in more than 1 million clinician visits.
- Risks factors include pes planus as well as pes cavus foot types, obesity, limb length discrepancy, Achilles tendon tightness, and occupations that require prolonged standing or walking.

## Symptoms and Signs

- The chief complaint is typically sharp and stabbing heel pain that is *most severe in the morning* or *standing after rest*.
- The pain usually improves with ambulation but may worsen after activity or at the end of the day
- there is localized tenderness upon palpation of the medial calcaneal tubercle. Passive dorsiflexion of the hallux may cause pain or discomfort in the plantar fascia.

The plantar fascia, which spans the bottom of the foot, is a tense band of connective tissue that acts like the string on a bow to help maintain the arch.

## Imaging

- imaging is rarely needed since the diagnosis of plantar fasciitis is usually clinical.

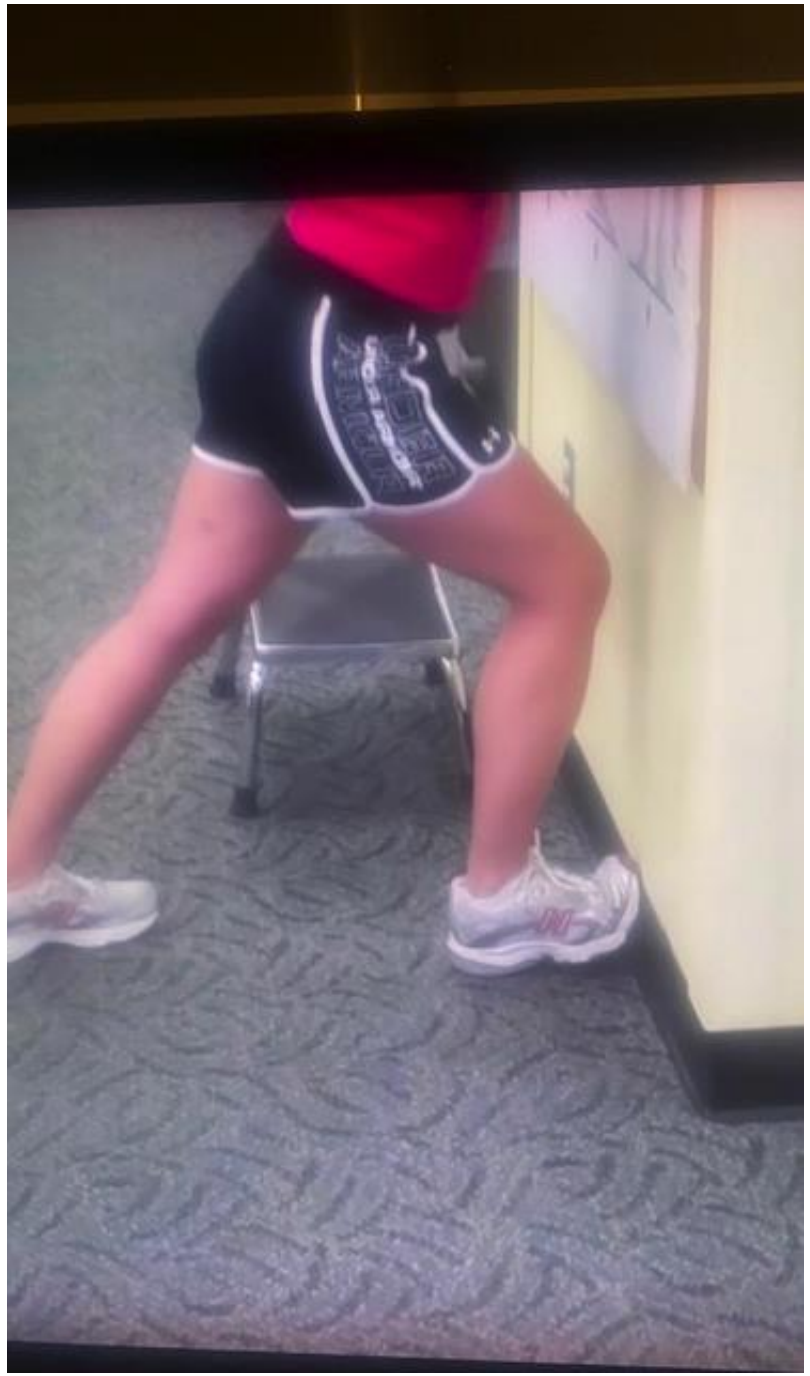
## Treatment

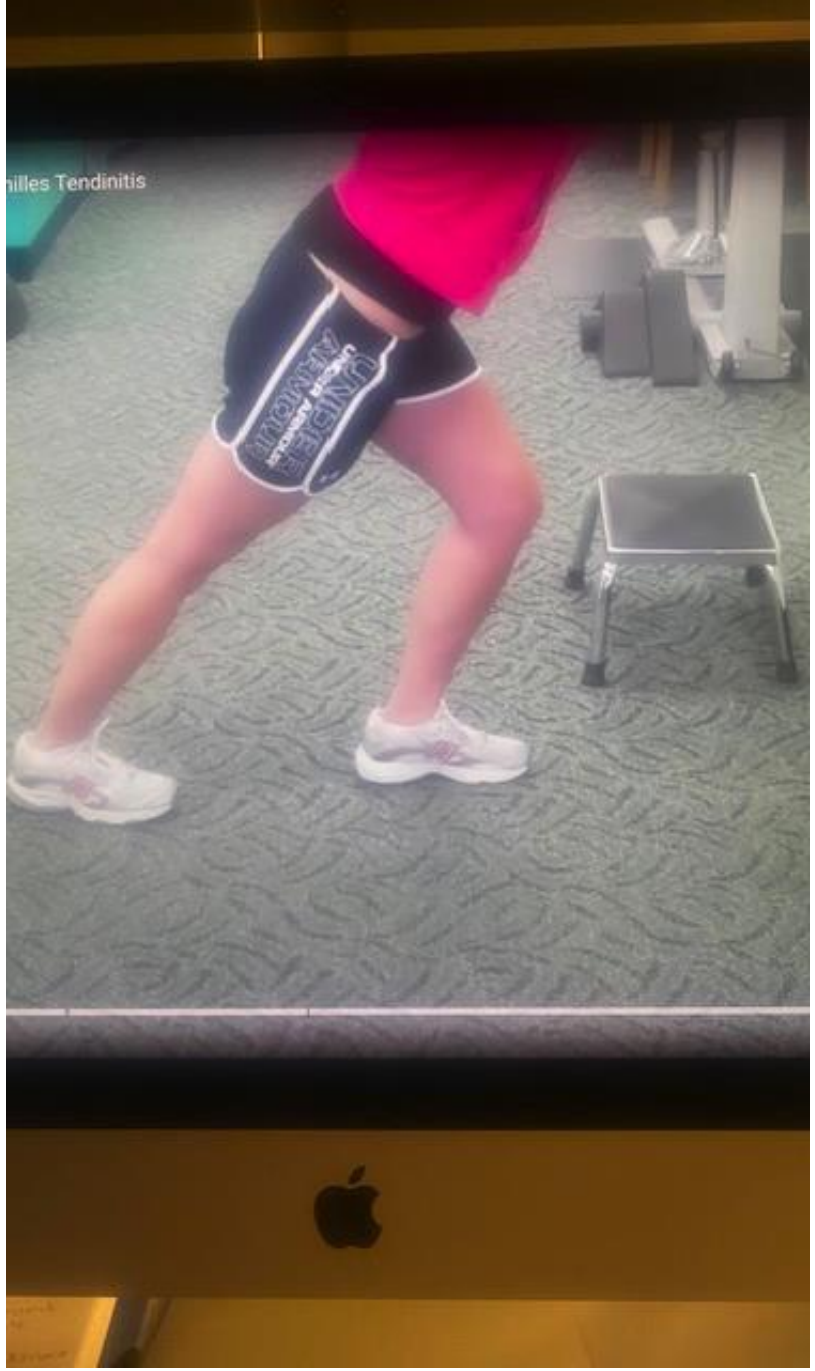
- Initial treatment of plantar fasciitis consists of stretching the Achilles and plantar fascia
- oral nonsteroidal anti-inflammatory drugs, night splints, and corticosteroid injections.
- Plantar fasciotomy done through either open or endoscopic technique may be effective for plantar fasciitis that does not respond to conservative treatment after 1 year

# note to be
# Heel spur

In the case of plantar fasciitis, the chronic inflammatory changes occur at the insertion point of the plantar fascia onto the calcaneus, and the fascia at this point may calcify, forming the plantar heel spur

It is important to note that the plantar heel spur is the *result* of the chronic, local ischemic conditions associated with plantar fasciitis, not the *cause* of the planter fasciitis

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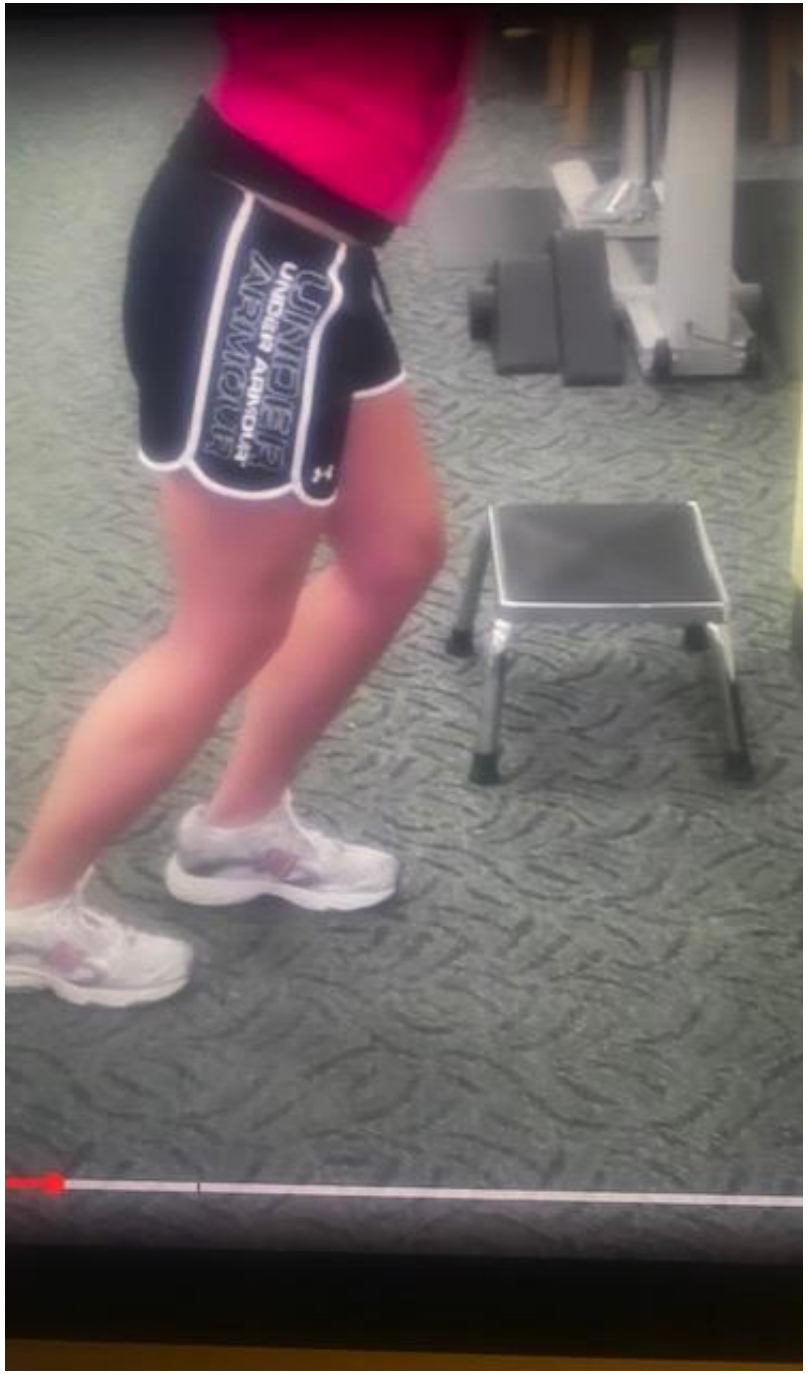

# summary planter fasciitis

***ESSENTIALS OF DIAGNOSIS***

Heel pain worse in the morning with initial weight bearing or after a period of rest.
Heel pain precipitated by a recent increase in activity.
Localized tenderness at the medial calcaneal tubercle.
Pain with passive dorsiflexion of the great toe.

# Tasks of consultation

2

-Management of continuing problem

3

-Modification of help seeking behavior

4

-Opportunistic health promotion

# Thank you

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Professor of family medicine