Practical Pearls for Primary Care

- A 67 yo woman who works as a paralegal comes to clinic for evaluation of memory loss. She reports she has been more forgetful at work, and over the past 6 months has had a concerning job performance evaluation (previously she had always received exceptional ratings). She has trouble concentrating, and slower recall. ROS is unremarkable except for a 20 pound weight gain over the past year. Exam: BP 150/90 P80 T 37 O2 sat 95 BMI 31 MMSE 26/30 (difficulty with 3 item recall). Rest of exam normal including neuro exam. Labs: B12 435 (normal), TSH .44 (nl .4-4.5), HCT 48 WBC 7,000 Na 138 Ca 9.5
- What would be appropriate next step?

A) Check free T4
B) MRI
C) Sleep study
D) Neuropsych testing

Sleep Apnea and Memory Concerns

- Study at a memory clinic. :
- The percentage of OSA in the subjective cognitive complaint group was significantly higher compared with the dementia group (26.7% vs 8.0%; OR 3.83 [95%CI 2.43-5.99]). Age differed significantly between the SCC group and the dementia group: 63.5 vs 71.5 years (7.6 ± 1.810; P < .001).

- Health Sci Rep. 2021;4:e228.

- A 55 yo man is admitted with rapid atrial fibrillation. He had a similar episode 1 year ago for which he received successful cardioversion. He has no other active medical problems. No smoking history. BP 120/70 P 120 (irregular). Cardiac exam normal
- Labs: TSH 1.0, TC 170 HDL 60 LDL 88 HBA1C 5.2
- Echo normal last year
- What is the most appropriate recommendation?
- A) Repeat echo
- B) Exercise echo
- C) Sleep study
- D) Check free T4
- E) Refer for ablation

Sleep Apnea and Atrial Fibrillation

- Study looking at recurrence of AF after cardioversion
- Patients with history of sleep apnea who used CPAP had a recurrence rate of 42% vs 82% recurrence in OSA patients who did not use CPAP (P=.013). Patients without OSA had recurrence rate of 39%

- Circulation. 2003;107(20):2589.

Sleep apnea and AF recurrence after catheter ablation

- Patients with untreated OSA have a higher recurrence of AF after ablation. Appropriate treatment with CPAP in patients with OSA is associated with a lower recurrence of AF (HR .41)(1)

- Recurrence rate of CPAP-treated patients was similar to a group of patients without OSA (HR: 0.7, p= 0.46). AF recurrence following ablation in CPAP nonuser patients was significantly higher (HR: 2.4, $p < 0.02$) and similar to that of OSA patients managed medically without ablation (HR: 2.1, $p = 0.68$). (2)

- 1) Heart Rhythm 2013;10:331–337

- 2) J Am Coll Cardiol 2013;62:300–5

- A 65 yo man comes to clinic concerned about frequent nocturia. He is getting up 4 times a night to urinate. He has been urinating about every 5 hours during the day He has been seen twice for this problem, and was diagnosed with BPH and started on tamsulosin. He found a slight improvement when he started on .4mg qhs, reducing his nocturia episodes from 4 to 3. His dose was increased to .8mg qhs, with no improvement in nocturia. Exam today BP 140/94 P 70 rectal exam- prostate is twice normal size without nodules. Labs: Na 140 K 4.0 Glu 80 Ca 9.6. He is frustrated as he feels tired and sleepy because of having to get up so often to urinate every night.

What is the best treatment/advice at this point?

A) Check a HBA1C

B) Start finasteride

C) Switch tamsulosin to terazosin

D) Evaluate for sleep apnea

Prevalence of Sleep Disordered Breathing among Patients with Nocturia at a Urology Clinic

- Questionnaires were used to assess daytime sleepiness, nocturia and lower urinary tract symptoms in 34 Urology clinic patients and 49 age-matched sleep apnea group patients.
- Sleep disordered breathing (>3% desat index) was found in 91.8% of the SA group patients and 70.6% of the URO group patients.
- The frequency of nocturnal urination was reduced after CPAP in the subjects resistant to conventional therapy.

- **Intern Med 55: 901-905, 2016**

Nocturia Improvement With Surgical Correction of Sleep Apnea

66 patients were included All had been diagnosed with OSA syndrome by polysomnography and underwent uvulopalatopharyngoplasty

- Preoperative and postoperative lower urinary tract symptoms (LUTS), quality of life (QoL), and nocturia episodes were evaluated using the International Prostate Symptom Score (IPSS) and overactive bladder symptom score (OABSS) questionnaires.
- Nocturia episodes significantly decreased from 1.7±1.1 to 0.8±1.2 (P=0.002). There was improvement in all patients with a successful surgery, none with a failed surgery
- Int Neurourol J 2016;20:329-334

Natural Products

A 33 y.o. woman has questions about treatments for migraine headaches. She has been treated in the past with B-blockers and tricyclic antidepressants and did not like the side effects. She would like a natural product. Which of the following has been shown to be effective for migraine prophylaxis in a controlled trial?

A) Ginkgo Biloba

B) Folic acid

C) Riboflavin

D) Selenium

E) Garlic

Riboflavin (B2) for migraine prophylaxis

- Placebo control randomized trial
- 55 patients with migraine, three month trial, riboflavin 400 mg vs. placebo
- Results: patients who improved by at least 50% (“responders”) placebo 15%, riboflavin 59% ($p<.002$)

Neurology 1998; 50:466-470

I. A 30 yo woman presents for evaluation of recurrent urinary tract infections. She has had 5 episodes of cystitis this year. She asks about whether there is a natural product that would be helpful for her. What should you recommend?

A) Cranberry extract
B) Iron
C) Gooseberry extract
D) D- Mannose
E) Tumeric

D- Mannose and UTI Prophylaxis

- 308 women with acute UTI who had a history of recurrent UTI
- All the women were treated for their symptomatic infection with ciprofloxacin (500mg twice daily for 1 week).
- Patients were allocated equally to three groups for 6 months :D-Mannose 2 gram daily, nitrofurantoin 50 mg daily or no prophylaxis
- 60% of no prophylaxis, 20 % of nitrofurantoin group and 15% of D-Mannose group had a UTI (P<.0001 vs no prophylaxis for both)
- World J Urol. 2014 Feb;32(1):79-84

More on D -Mannose

- Meta analysis of D-Mannose for UTI prophylaxis
- 3 studies, RR for UTI recurrence with D-Mannose .23 (95% CI .14-.37) vs placebo and RR .39 (CI .12-1.25) compared to antibiotic prophylaxis

- Am J Obstet Gynecol 2020;223

Cranberry Juice and Cranberry Extract and UTI

- Cranberry juice cannot currently be recommended for the prevention of UTIs
- Other preparations (such as powders) need to be quantified using standardized methods to ensure the potency, and contain enough of the 'active' ingredient, before being evaluated in clinical studies or recommended for use
- Cochrane Database of Systematic Reviews 2012, Issue 10. Art. No.: CD001321.

- A 60 yo woman presents to clinic with increasing pain in her left leg. She had a DVT in her left leg 2 years ago, which involved a large portion of her superficial femoral vein. She has noticed edema over the past few weeks, and pain has been more severe over the past 3 months. On exam, varicosities on LLE, 2+ edema. Duplex of the LE does not show DVT, does show a great deal of venous valvular incompetence. She has tried compression stockings for the past 2 weeks. What is the best treatment option?
- A) Rivaroxiban
- B) Amitriptyline
- C) Ibuprofen
- D) Horse chestnut

Horse Chestnut Extract in Patients with Venous Insufficiency

- Study was carried out to compare the efficacy (oedema reduction) and safety of compression stockings class II and dried horse chestnut seed extract (HCSE, 50 mg aescin, twice daily) compared to placebo.
- Lower leg volume of the more severely affected limb decreased on average by 43.8 mL (n = 95) with HCSE and 46.7 mL (n = 99) with compression therapy, while it increased by 9.8 mL with placebo (n = 46) after 12 weeks therapy P=.005 for Horse chestnut, P=.002 compression compared to placebo

- Lancet 1996;347(8997):292

GI Pearls

1) A 43 yo man presents to the ED with dizziness and a 6 hour history of passing maroon stool. He has been in good health with his only medical problem being depression. Medications: sertraline. On exam, BP 100/60 P 100 lying down, BP 90/60 P130 standing up. Rest of exam is normal. Lab: HB 10 HCT 30 WBC 4.6 Plt 175,000 Na 142 Cl 100

- HCO3 24 K 3.8 BUN 38 Cr 1.1.
- What is the most likely source of bleeding?
- A) Gastric ulcer
- B) Meckel's diverticulum
- C) AVM
- D) Diverticulosis
- E) Hemorroids

Factors Predictive of Upper GI Source for Bleeding

- Melena reported LR 5.9
- Melenic stool on exam LR 25
- Blood or “coffee grounds” in NG LR 9.6
- BUN/Cr ratio >30 LR 7.5

- JAMA. 2012 Mar;307(10):1072-9.

SSRI's and Risk of GI Bleeding

- SSRI vs placebo OR 1.41 (CI 1.27-1.57), p<.00001 (1)
- SSRI vs placebo OR 1.66 (1.44-1.92) (2)

NNH (low risk) 3177, NNH high risk 881

- SSRI + NSAID OR 4.25 (2.82-6.42) (2)

1) Pharmacological Research 2017: 118: 19-32

2) Am J Gastroenterol. 2014 Jun;109(6):811-9.

3) A 44 yo woman presents with abdominal discomfort. She has had pain in the right upper quadrant for the past few weeks. Her pain improves after she eats. She has also noticed black tarry stools over the past week. She has also noticed more bloating recently. PE: BP 96/60 P 90 Abdomen- soft, mid epigastric and RUQ tenderness. Lab- HB 10 HCT 30 WBC 9,000 AST 30 ALT 25 Alk Phos 100

- What is the most appropriate next step?
- A) Abdominal ultrasound
- B) Contrast CT scan
- C) MRCP
- D) Upper endoscopy
- E) Trial of PPI

Indications for Upper Endoscopy in Patients with Dyspepsia

1) Prescence of alarm features

Age >50 years

Anemia

Melena/rectal bleeding

Weight loss

Anorexia/early satiety/persistent vomiting/dysphagia

Prior gastric surgery/abdominal mass

FH UGI malignancy in 1st degree relative

2) No response to PPI trial

GASTROINTESTINAL ENDOSCOPY Volume 82, No. 2 : 2015

4) Endoscopy shows a deep duodenal ulcer, without visable vessel. Testing of the ulcer is positive for H. Pylori infection. Allergies: PCN-hives. What do you recommend?

A) PPI X 8 weeks, repeat endoscopy
B) Clarithromycin/amoxicillin /PPI X 14 days
C) Clarithromycin/metronidazole/PPI X14 days
D) Bismuth/tetracycline/PPI X 21 days

Treatment and Follow up of H Pylori infection

1st line therapy

Clarithromycin/amoxicillin/PPI X14 days

Clarithromycin/metronidazole/PPI X 14 day (PCN allergic)

Test for eradication (4 weeks after treatment)

Urea breath test or fecal antigen test

Endoscopy not favored

H Pylori Related Disease

- PUD
- MALT lymphoma- therapy for extranodal marginal zone lymphoma stage 1 or 2 is H pylori eradication alone
- Chronic gastritis/Atrophic gastritis

Iron def anemia

ITP

B12 def

Gastric cancer

9) A 68 yo woman presents with abdominal pain. She has had a 2 day history of left sided abdominal pain. She has felt warm, but has not had any chills. She has not had dysuria, flank pain . No nausea or vomiting, appetite is slightly diminished.PE: T 35.9 BP 130/88 P 90. She has LLQ tenderness on exam without guarding or rebound. Lab: HB 12 HCT 37 WBC 11.7. Abdominal CT scan shows inflammation of the sigmoid colon and mesentery

Which of the following is the most appropriate management?

A) Admission for IV ampicillin/sulbactam
B) Oral amoxicillin/clavulanate
C) Oral Trimethoprim/Sulfa
D) General surgery consult
E) Liquid diet, reassess patient in 2 days

No Antibiotics for Mild Diverticulitis

- Prospective, multicentre, open-label, noninferiority, randomized controlled trial of 480 patients with mild acute diverticulitis- received amoxicillin/clavulanate or no antibiotics
- No difference in between hospitalization rate (5.8% in antibiotic group, 3.3 in no antibiotic group), revisits (6.7 vs7%), or pain control (5.7 vs 2.3)

- Ann Surg. 2021;274(5):e435.

10) A 34 yo man presents for evaluation of intermittent solid food dysphagia and chest discomfort. He has no significant past medical history He has tried famotidine without any relief.

- Endoscopy:

What is the Most Appropriate Therapy?

A) Nitroglycerin SL
B) Sucralfate suspension 1 gram q6 hours
C) Fluconazole 200 mg qday X 10 days
D) Fluticasone MDI 220 mcg swallow BID
E) Azathioprine 100 mg qday

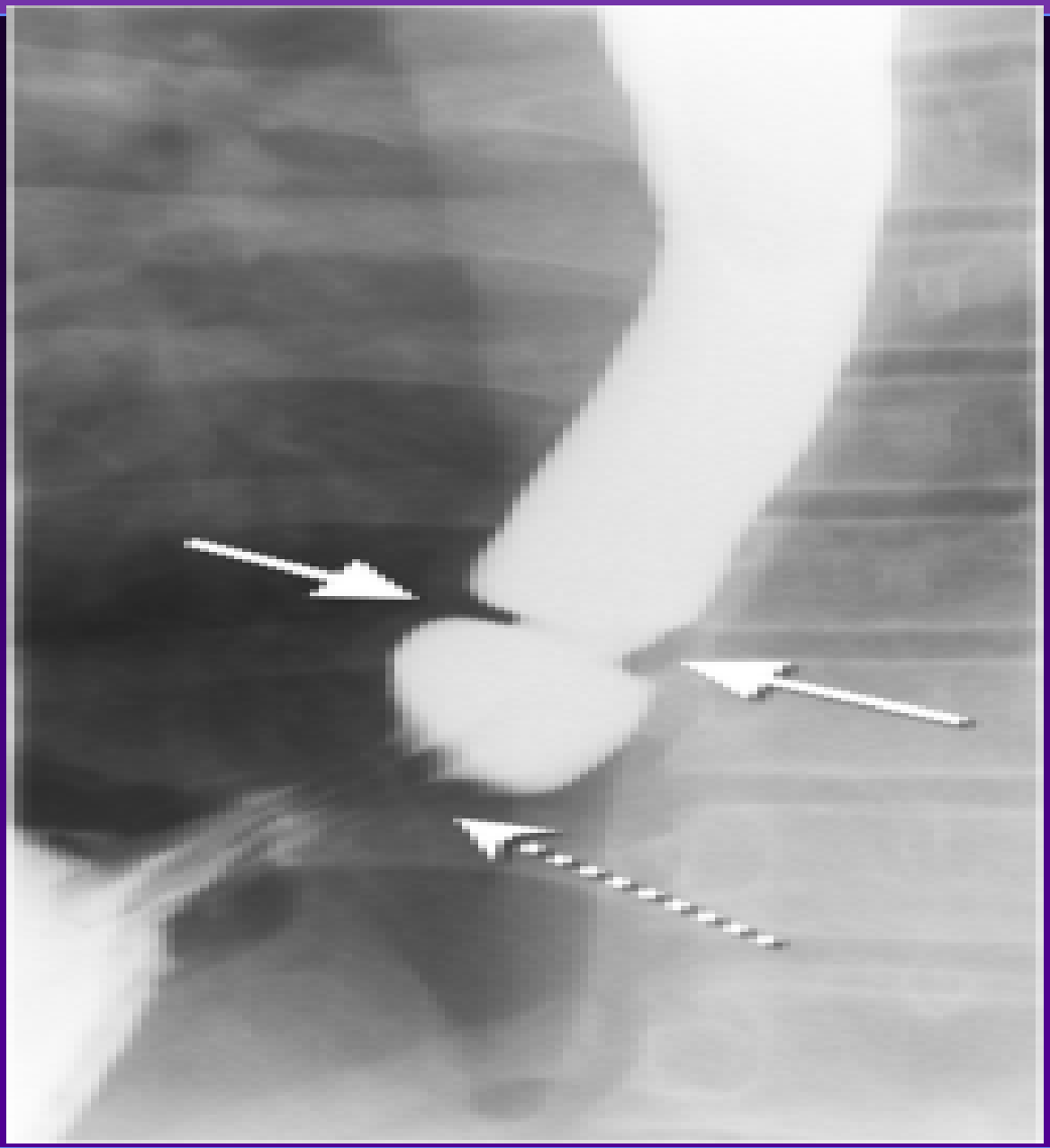
Eosinophilic Esophagitis

- More and more common
- Think of it in your differential for dysphagia in young adults
- Multiple rings, often with whitish exudate
- Biopsy shows > 20 eosinophils/HPF
- Treatment: Avoidance of allergen, Inhaled fluticasone swallowed, PPI's

13) A 56 yo man calls to report an episode of food sticking in his esophagus. He was at a dinner party yesterday, and a piece of steak got stuck for about 30 minutes. He reports that this has happened to him twice before in the past few years, but he had forgotten to mention it at clinic visits. He has a history of GERD which he takes infrequent PPI's for. He has a 20 pack year smoking history, quitting 5 years ago. He does not drink alcohol.

I What is the most likely diagnosis?

A) Pummer-Vinson syndrome
B) Esophageal cancer
C) Zenker diverticulum
D) Achalasia
E) Schatki's ring



Schatzki's Ring

- Associated with hiatal hernia in 97%

- Located at squamocolumnal junction
- Intermittent dysphagia to solid foods
- Can present with episodic food impaction, acute dysphagia
- Dx- Barium swallow/endoscopy
- Treatment- Dilation

- A 69-year-old man presents with increasing dyspnea on exertion. He has had recent orthopnea and paroxysmal nocturnal dyspnea. He has a history of well controlled hyperlipidemia. He takes the following medications: atorvastatin. On exam, his blood pressure is 110/60 mm Hg, and his pulse is 90 beats per minute.

A cardiac examination found normal heart sounds with no murmurs.

A chest examination found dullness to percussion at both bases and rales.

A chest x-ray showed bilateral effusions and mild pulmonary edema.

The brain natriuretic peptide test found a level of 1,300 picograms/mL.An ECG found LVH, an ejection fraction of 45%, and normal aortic and mitral valves.

- What history would be the most helpful in making a diagnosis?

A. History of prostate cancer

B. History of carpal tunnel syndrome

C. History of playing professional football

D. History of hyperlipidemia

E. History of ulcerative colitis

CTS and Amyloid

- Prospective, cross-sectional, multidisciplinary study of consecutive men age ≥50 years and women ≥60 years undergoing carpal tunnel release surgery. Biopsy specimens of tenosynovial tissue were obtained and stained with Congo red.
- Of 98 patients enrolled (median age 68 years, 51% male), 10 (10.2%) had a positive biopsy for amyloid
- J Am Coll Cardiol. 2018 Oct 23;72(17):2040-2050.

- 34% of idiopathic CTS patients had amyloid in an older study Hum Pathol. 2011;42(11):1785.

More on CTS and Amyloid Heart Disease

- A diagnosis of CTS was associated with a higher incidence of heart failure (hazard ratio, 1.54; CI, 1.45-1.64).
- An increased risk of amyloid (HR, 12.2) in patients who had surgery for CTS

- J Am Coll Cardiol. 2019;74:15-23

Pearls on Suspecting Amyloid (Wild Type ATTR)

- LVH on Echo without hx hypertension or aortic stenosis
- Bilateral CTS
- Autonomic and peripheral nerve disease
- Spinal stenosis
- Biceps tendon rupture

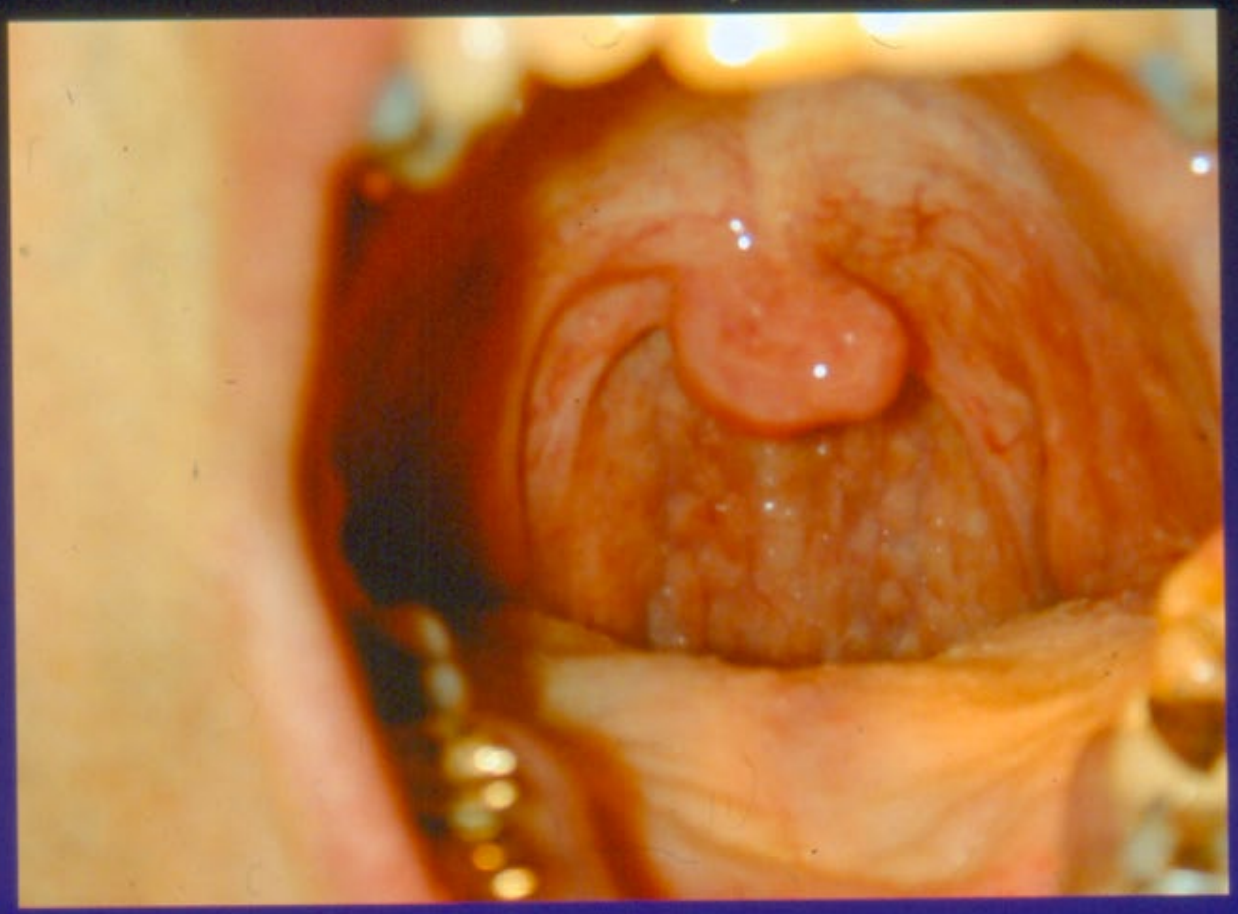
Physical Exam Pearls

What Is The Best Way To Look At The Pharynx?

Pharyngeal Exam

- Say Ahhhh (marginal)
- Tongue blade (mean)
- Yawn
- Roar like a lion (Peds)

Cobblestoning



A 48 yo man presents for the evaluation of fatigue and decreased exercise tolerance. He has not felt well for the past 4 months. He has a 50 pack-year smoking history and a history of excessive alcohol use. He has noted that in the past few months his fingers have looked different (slide). What disease would be the most consistent with this history AND exam finding?

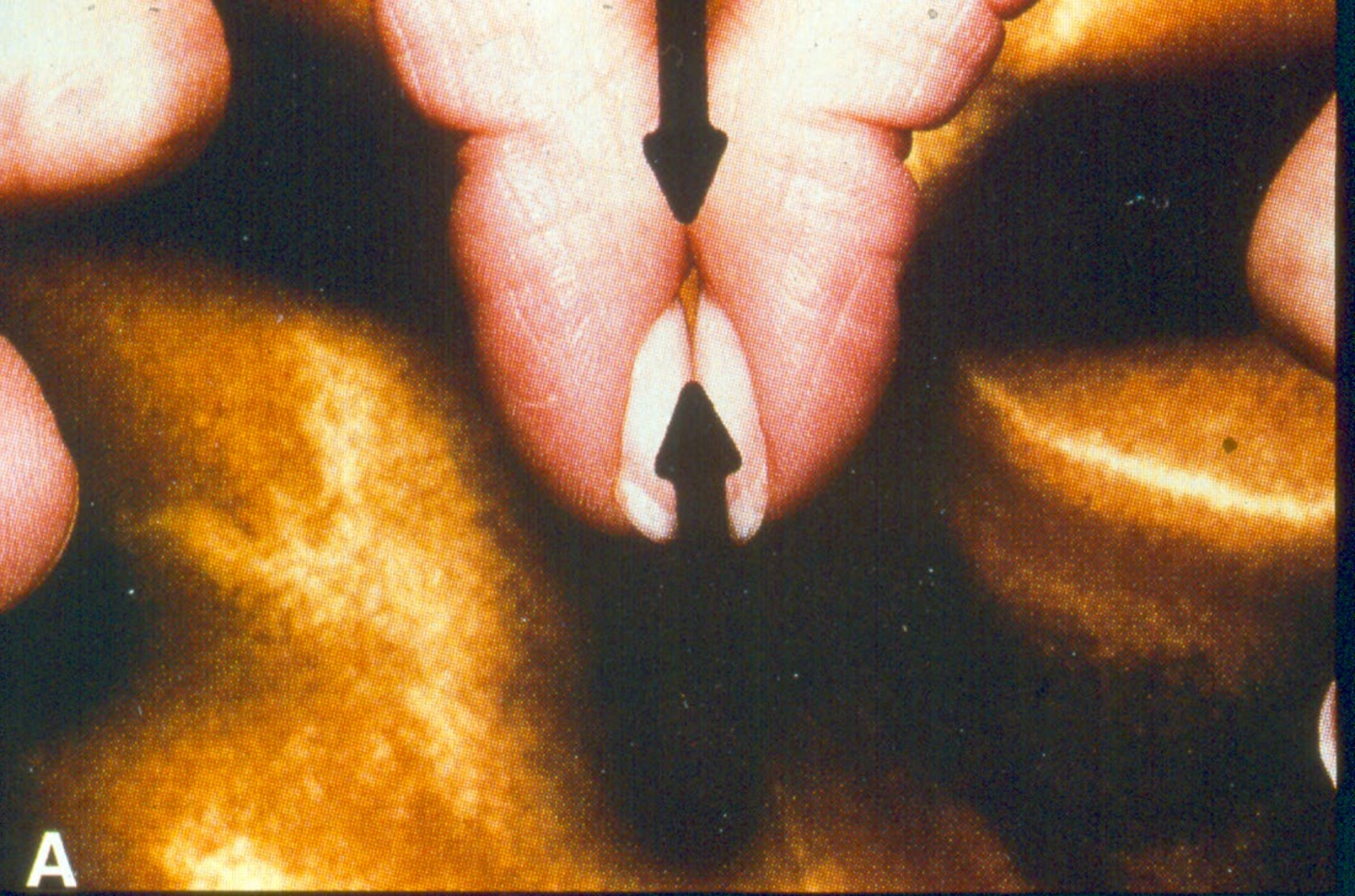
A) HIV disease

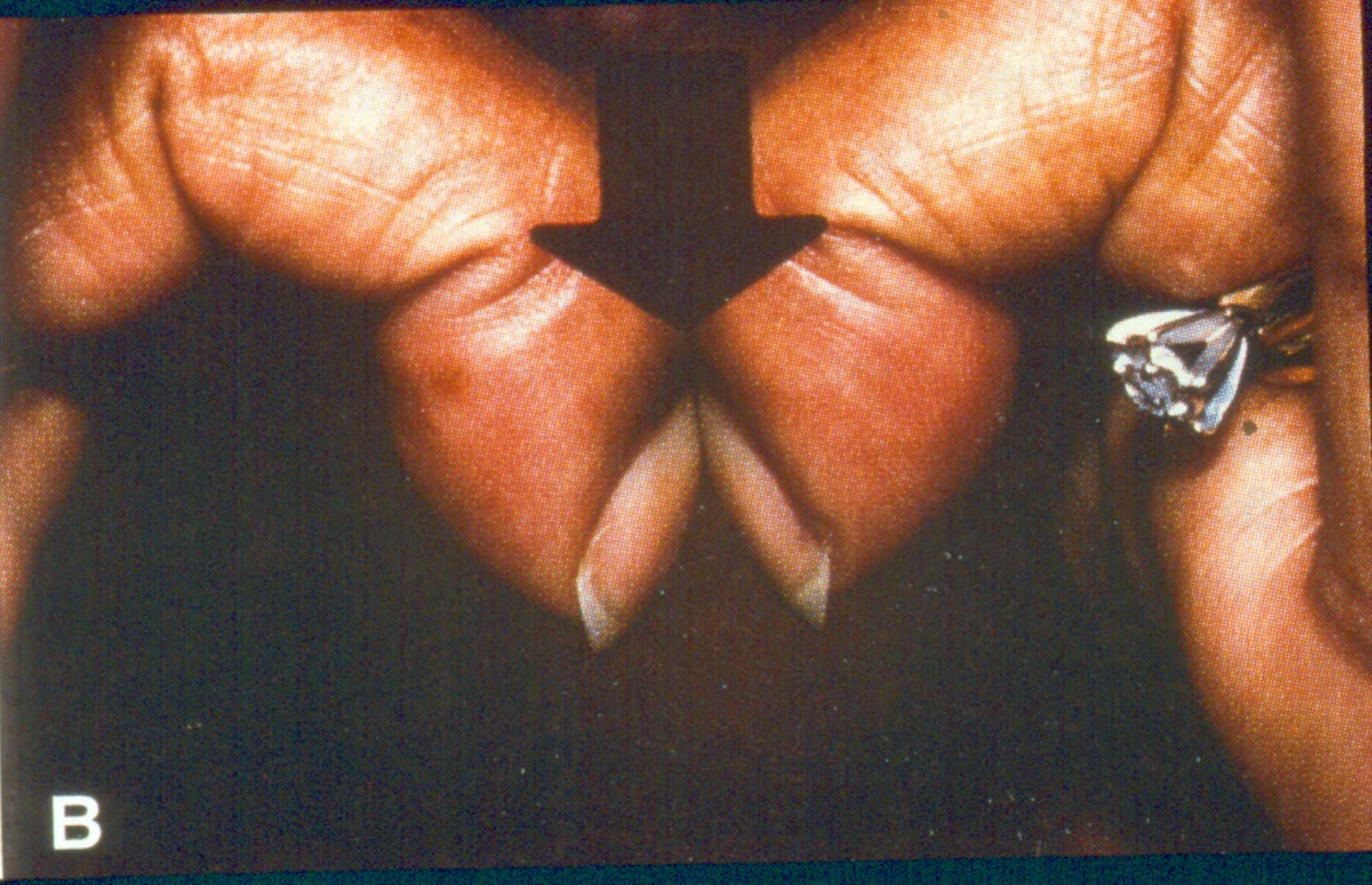
B) Emphysema

C) SLE

D) Recurrent pulmonary emboli

E) Lung abscess


A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Clubbing

- Sponginess at the nail bed
- Loss of the nail angle/ loss of the diamond
- Finger pad > DIP joint

- A 62 yo woman comes to clinic for evaluation of night sweats. He has been having drenching night sweats for the past 3 months. She has to change his night shirt at least once per night. She has had a 10 pound weight gain over the past 6 months. No chest pain, nausea, fatigue. She has had a cough for the past 6 months.
- Which is the most likely diagnosis?

A) GERD
B) Tuberculosis
C) Lymphoma
D) Hypothyroidism
E) Hyperthyroidism

What Do Most Medical Professionals Think of When Patients Have Night Sweats?

- Lymphoma
- Tuberculosis
- Menopause

Are Night Sweats a Poor Prognostic Sign?

- Two groups of patients (n=682 and n=852) over age 65 were followed for an average of 7 years, looking at night sweats as a prognostic factor
- No correlation to the presence of night sweats, or the severity of night sweats with increased mortality

- J Am Board Fam Med 2010:23(1):97

How About GERD?

- GERD is common , especially at night
- Several case series- with resolution with treatment 12/12 (1), 2/2 (2)

- 1)J Clin Gastroenterol 1989;11:590-1.
- 2) An Med Interna 2007Jun ;24(6):285-8.

Nocturnal Sweating and Sleep Apnea

- 822 untreated patients with OSA, control group 703 randomly selected patients from general population
- Frequent nocturnal sweating reported in 31% of men and 33% of women with OSA, compared to 9% of men and 12% of women in general population
- Prevalence of nocturnal sweating decreased from 33% to 11.5% with PAP therapy, $p<.003$ compared to non-users
- BMJ Open 2013;3(5) May 14

Prevalence Based Evaluation

- Menopause ?
- Sleep Apnea?
- GERD?
- Medications?
- If no red flags, observe for more clinical clues

- A 67 yo man asks about what he can do to prevent dementia. He reports his mother had dementia, and he wants to do everything he can to prevent it. Which of the following has evidence of benefit?
- A) Vitamin C
- B) Vitamin E
- C) MVI
- D) Keto diet
- E) Red Wine

What Doesn't Work

- Alcohol- decreased brain size with as little as 1 drink a day*
- Vitamin E- No +

- +Cochrane Database . 2017 Apr 18;4(4):CD002854.
- *NATURE COMMUNICATIONS | https://doi.org/10.1038/s41467-022-28735-5

MVI To Prevent Dementia?

- Study of effects of Cocoa vs MVI vs placebo
- 2262 patrticipants, mean age 73, intake eval, then annual cognitive screens
- Cocoa no effect (p=.28)
- MVI p<.007 compared to placebo

- Alzheimer's & Dement. 2022;1–12.

Keep Moving to Keep Your Mind

- Prospective, population based, cohort study. 78,430 participants or mean of 6.9 years.
- The optimal dose was 9826 steps (hazard ratio [HR], 0.49; 95% CI, 0.39-0.62) and the minimal dose was 3826 steps (HR, 0.75; 95% CI, 0.67-0.83).

- JAMA Neurol. 2022 Sep 6;e222672.

Processed Foods and Cognitive Decline

- **Objective** To investigate the association between ultraprocessed food consumption and cognitive decline.
- **Exposures** Daily ultraprocessed food consumption as a percentage of total energy divided into quartiles.
- **Main Outcomes and Measures** Changes in cognitive performance over time evaluated by the immediate and delayed word recall, word recognition, phonemic and semantic verbal fluency tests, and Trail-Making Test B version.

- **Results** 10 775 participants whose data were analyzed. During a median (range) follow-up of 8 years, individuals with ultraprocessed food consumption above the first quartile showed a 28% faster rate of global cognitive decline (95% CI, −0.006 to −0.001; P = .003) and a 25% faster rate of executive function decline (95% CI, −0.005 to 0.000; P = .01) compared with those in the first quartile.

- JAMA Neurol. Published online December 5, 2022.

Aroma Therapy for Cognitive Decline?

- 43 adults 60-85 recruited to participate-randomly assigned to receive olfactory stimulus (rose, eucalyptus, lavender, lemon, rosemary) 2 hours at bedtime or be in control group
- Olfactory stimulus group had statistically significant improvement compared to control on the Rey auditory verbal learning test, and had improvement in functioning in the left uncinate fasciculus on functional MRI
- Front Neurosci 2023;17 (July 24)

Simple Things to Decrease Dementia Risk

- Walk minimum of 4000 steps a day
- MVI
- Hearing AIDS/Vision treatment as needed
- Avoid processed foods
- Aroma therapy?