DYSPEPSIA

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Overview

Dyspepsia is a common presentation and is often described as chronic or recurrent discomfort centered in the upper abdomen. It can include symptoms of upper abdominal discomfort, nausea, bloating, fullness and early satiety. It can be caused by a variety of conditions, and symptoms of possible causes often overlap, which can make initial diagnosis difficult. For many patients, a definite cause is never established. For every patient, it is important to consider H.Pylori status and rule out alarm features (>55, melena, dysphagia, weight loss, anemia, hematemesis) and use of NSAIDS. [1,7,8,9]

Diagnostic Considerations [1,2,8,9,10]

Diagnosis	History / Physical	Investigations
Functional Dyspepsia (non-ulcer dyspepsia)	Variable presentation which can include epigastric discomfort, nausea, bloating, etc. ~60% of dyspepsia cases Unclear etiology	Endoscopy -> negative for structural / infectious causes of dyspepsia
PUD	Burning, gnawing, "hunger-like" pain or vague discomfort in epigastric area **DU (12% of dyspepsia cases):** Pain on empty stomach, night symptoms (acid secretion is maximal 11pm-2am) Relief with food, alkali substances, and antisecretory meds. **GU (6% of dyspepsia cases):** Pain after meals, not relieved by food or antisecretory meds	***H. Pylori testing*** (e.g. serology, rapid urease during endoscopy, or stool antigen). ***preferred test is urea breath test (UBT)** + serum testing for H. Pylori can mean either active or past infection and can stay positive after eradication. UBT is the recommended test to determine successful eradication(no need if symptoms resolve.) **Avoid UBT within two weeks PPI use or 4 weeks of antibiotic therapy as can give false negative result.** HpTest and treat strategy is as effective as endoscopy in initial mx of patients with uncomplicated dyspepsia <55 years old ***Consider endoscopy*** if alarm sx, unresponsive to treatment ***Barium Swallow (upper GI series)*** reserved for those who cannot tolerate endoscopy (but has lower yield – 70% accuracy)
GERD	Burning retrosternal pain, regurgitation Can be worse when lying down Worse with certain foods (i.e. EtOH, spicy foods, tomatoes, peppermint) Can have chronic cough/hoarseness/dysphagia	Based on history and response to PPI/H2RA Consider ***endoscopy*** if: red flag sx, longstanding hx of GERD needing continuous therapy (approaching 10 years), or lack of response with conventional therapy ***24 hr pH monitoring:*** can be used to confirm dx if persistent sx/failed tx ***Barium swallow*** - low sensitivity but can detect complications of GERD (esophagitis, ulcerations, strictures)

Differential Dx

IBS: Rome Criteria – at least 2/3 criteria for at least 3/12 in last year (1. Pain relieved by defecation 2. Pain related to change in frequency of stool, 3. Pain related to change in consistency of stool)

Medication related [1,4,8]: NSAIDs,(including ASA and COX-2 inhibitors – 20% of patients using these meds >12 weeks have endoscopic evidence of ulceration), calcium channel blockers, bisphosphonates, iron and potassium supplements, steroids, antibiotics (esp. erythromycin, metronidazole), amiodarone, acarbose, metformin, orlistat, opiates, theophylline

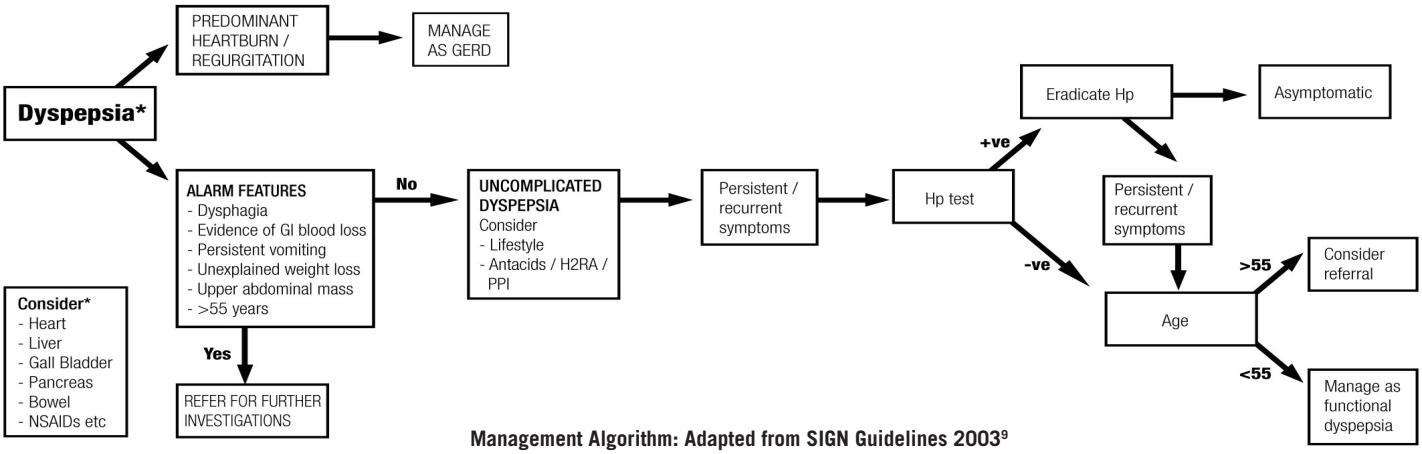
Biliary: RUQ/epigastric pain following meals (esp. fatty). Asymptomatic weeks-months in between. Can be associated with bloating, sweating, N/V

Pancreatitis: Acute onset, usually max. intensity within 10-20 min, constant, ++severe, radiates to back. RFs: EtOH (esp. if pain onset 1-3 d post binge), gallstones

Metabolic disorder/dysmotility: hx of diabetes (gastroparesis –nausea/bloating/anorexia), hyper/hypothyroidism, hyperparathyroidism, scleroderma

Cancer: Symptoms ass. w/ alarm sx: Age >55, weight loss, progressive dysphagia, long hx of GERD (Barrett's), anemia, hematemesis, melena, persistent vomiting, jaundice, FHx GI malignancy

Cardiac: if pain occurs with exertion – assess cardiac RFs and do cardiac evaluation



Management Algorithm: Adapted from SIGN Guidelines 2003[9]

Dr. Michael Evans developed the One-Pager concept to provide clinicians with useful clinical information on primary care topics.

DYSPEPSIA

Management [1,4,7,8]

Lifestyle modifications: recommended despite limited evidence because of low cost and relative safety:

1. Dietary: smaller, more frequent meals, decrease offending foods (e.g. EtOH, spicy/greasy foods, coffee, peppermint, tomatoes)
2. Avoid lying down for > 2 hr after eating
3. Avoid tight fitting clothing
4. Weight loss if obese
5. Limit alcohol intake
6. Stop smoking
7. Elevate legs under head of bed (10-15 cm blocks)

Patient Resources [1,7,8,9]

1. http://familydoctor.org/online/famdocen/home/common/digestive/disorders/474.html
2. http://familydoctor.org/online/famdocen/home/common/digestive/disorders/087.html

Pharmacotherapy for Dyspepsia [2,4,6,7,9]

Class	Indication/Clinical Efficacy	Concerns	Additional Comments*
H2 receptor antagonists: BID or daily dosing Cimetidine 400-600/800mg (Tagamet™) Famotidine 20/40 mg (Pepcid™) Nizatidine 150/300 mg (Axid™) Ranitidine 150/300 mg (Zantac™)	For mild-mod symptoms (50% relief after 8 weeks of tx) Maintenance tx Not recommended for erosive esophagitis/ NSAID induced ulcers 60-80% healing for uncomplicated non H.pylori DU/GU after 8-12 wks of tx	Not as effective as PPIs Well tolerated (occsnl h/a, confusion, diarrhea/ constipation) Drug interactions (selected): warfarin (cimetidine), phenytoin (cimetidine, ranitidine) , theophylline (cimetidine) Decrease dose for: CrCl <50Ml/min, elderly, renal/hepatic dysfn May alter absorption of pH dependent drugs ** Cimetidine: More se's, esp. in elderly/renal dysfn Ranitidine: preferred in pregnancy* Famotidine: preferred for BrFeeding*	H2RA's equal in efficacy Can use for nighttime acid suppression***
Proton pump inhibitors: Daily dosing Esomeprazole 20 mg (Nexium™) Lansoprazole 30 mg (Prevacid™) Omeprazole 20 mg (Losec™) Pantoprazole 40 mg (Pantoloc™) Rabeprazole 20 mg (Pariet™)	For mod-severe symptoms (80% symptom relief after 8 weeks) **GERD**: Standard dose x 4-8 wk then d/c. If symptoms recur, repeat therapy. If symptoms unresolved give standard dose BID x 4-8 wk or consider further investigation. 10 mg omep/rabep may be effective for maintenance **PUD**: H.pylori positive – see below; non-H. Pylori DU/GU 4-8 weeks tx. **NSAID-induced ulcer:** 8 weeks tx (can use for prophylaxis as well)	Can alter absorption of pH dependent drugs** If longterm PPI, for patients needing calcium supplementation switch to Ca citrate Clopidogrel: consider pantoprazole or rabeprazole (least CYP2C19 inhibition); class effect of PPIs on clopidogrel not yet ruled out Omeprazole may increase effects of phenytoin, diazepam, warfarin Generally well tolerated, but can cause H/A, nausea, diarrhea	Take 30-60 min before a meal (optimal as proton pump most active) PPIs equal in efficacy Start with OD dosing, but can use BID dosing for persistent symptoms or complicated ulcers – bleed/ perforation but the goal should be to reduce to the lowest effective dose over time when symptoms stabilize. Not efficacious for treating cough/ laryngeal symptoms associated with GERD
H. Pylori eradication **1st Line:** Triple tx: PPI +Amoxil 1g +Clarithromycin 500 mg BID x 7days) **1st line (for pen allergic)** Triple tx: PPI + Metronidazole 500 mg BID + Clarithromycin 250 mg BID x 7 days **Alt. 1st line:** (for pen all/recently used macrolide or as salvage) Quad tx: PPI +Bismuth subsalicylate 30 mL QID + 2 Abx (metronidazole 250mg QID +tetracycline 500 mg QID) x 7-14d) PPI dose (same as above but give BID dosing)	For H.Pylori+ve patients diagnosed during biopsy, urea breath test, stool antigen for H.pylori 7 day eradication tx will avoid unnecessary long-term use of acid suppressive tx.	See PPI section for additional concerns Metronidazole: avoid EtOH (disulfiram rxn) Bismuth suspension preferred to tablets to avoid drug interaction with tetracycline; may cause temporary darkening of stool and tongue, diarrhea	Treatment decreases recurrence rate 7-fold All 7 day regimens equally effective (eradication rate > 80%) H. Pylori +ve (NOTE: re-testing post therapy NOT required except if symptoms persist, or in patients with bleeding or perforated ulcers, MALT lymphoma or gastric cancer May need extended acid suppressive therapy for 8-12 weeks post initial treatment for complicated ulcers (bleeds/perforations)
Over the counter meds: Mg /Al hydroxide antacids: 50-100 mEq 1 hr pc meals/hs Calcium Carbonate (e.g. TUMS™) 200 – 400 mg PRN (Max 2 g elemental Ca/d) Alginates (e.g. Gaviscon™) 2-4 tsp pc meals and hs **H2RA:** Famoditine 10 mg 1-2 x/d Ranitidine 75 mg 1-2 x/d Bismuth subsalicylate (Pepto bismol™) 30 mL or 2 tab q0.5 – 1 hr prn (max. 8 doses/d)	For mild-moderate episodic heartburn and GERD)	Pregnancy: antacids and alginates preferred* Antacids and alginate products may interfere with absorption of some drugs (i.e. digoxin, iron, tetracycline, quinolones) – as such space dosing 2 hr apart	Try lifestyle first; avoid precipitating and aggravating factors All have comparable efficacy If symptoms persist after 2 week trial, patient should seek further medical evaluation

* please refer to Motherrisk guidelines for further information on drug safety in pregnancy and breastfeeding[5] ** ketoconazole, itraconazole, atazanavir, indinavir , calcium carbonate, consult reference for others

***Can consider H2RA+PPI together in patients with noctural breakthrough sx despite BID PPI. Unclear clinical significance, but may be worthwhile to add ranitidine 300 mg or equivalent qhs.

Bottom Line

In general for all patients, consider lifestyle modification and avoidance of triggers (i.e. medication, offending foods.) In young patients (<55 yo) with no alarm symptoms, consider testing for H. Pylori and treat with triple therapy if positive, and if negative treat with acid suppression (PPI/H2RA) for 4-8 weeks. In older patients (>55 yo), especially those with longstanding severe GERD, and younger patients with alarm symptoms, these patients should go for prompt endoscopy. If endoscopy is negative, reconsider the diagnosis. Consider referral for assessment for patients with red flags or those who have uncomplicated dyspepsia whose symptoms persist after initial management strategies. For functional dyspepsia, most practitioners begin with lifestyle modifications and can consider step up therapy with H2agonists or step down with PPIs for 4 week trial. Medication is not necessary for all patients with functional dyspepsia, but when given –short term or intermittent treatment is more appropriate than long term continuous therapy. It is not possible to make recommendations on the role of antidepressants, psychosocial counseling or prokinetics with dyspepsia symptoms as further studies need to be done to show efficacy and value.

References can be found online at http://dfcm.utoronto.ca