

## Peptic ulcer

some induced by an infection by *H.pylori* and some may be induced as stress ulcer by the triple therapy, especially in patients presented in ICU.

However, the non-pharmacological treatment also plays an important role in order to enhance ulcer healing in addition to the medication.

anti-secretory agents are highly effective medications. *H2*-blockers are the second group, and antacids are weak bases and they are effective for symptomatic treatment for acid neutralization.

- ❖ Weak bases Quickly acting or reacts with gastric acid to form water and salts.
- ❖ Just to reduce gastric acid by neutralizing the HCL in stomach (no effect on acid secretion) for up to 2 hrs.
- ❖ So, antacid Not used for treatment of peptic ulcer, but used for symptomatic treatment, they don't heal the ulcer such as PPI.

However these medications are taken after meals in order to increase their duration of action. we said these antacids are OTC, ( calcium carbonate, sodium bicarb, aluminum hydroxide and magnesium hydroxide ), all are weak bases, but they varied in their side effects a little bit, and varied in their onset of action.

Commonly used antacids are combinations of salts of aluminum and magnesium, such as aluminum hydroxide and magnesium hydroxide  $[\text{Mg}(\text{OH})_2]$ , Calcium carbonate  $[\text{CaCO}_3]$  and sodium bicarbonate  $[\text{NaHCO}_3]$ .

But antacids sometimes may inhibit the absorption of some medication either by increasing the PH or by inducing a non-absorbable complex or a chelation .

Side Effect	Drug -Drug Interactions	Patient Education
<ul style="list-style-type: none"> <li>• Magnesium containing antacid can cause diarrhea.</li> <li>• Aluminum containing antacid cause constipation .</li> <li>• Calcium carbonate cause belching.</li> </ul>	<ul style="list-style-type: none"> <li>• Antacids have significant drug interactions with               <ol style="list-style-type: none"> <li>1.tetracyclines</li> <li>2.ferrous sulfate</li> <li>3. isoniazid</li> <li>4.and quinolone antibiotics.</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Take this medication by mouth, usually after meals and at bedtime as needed.</li> <li>• Avoiding use Antacid at the same time as any other medication because of many interaction (ask your health care provider)</li> <li>• Use antacid with caution if patient has cardiac,renal or fluid retention.</li> </ul>

إذا بتذكرو لما حكينا بالمايكرو انه ال tetracycline ال fluoroquinolons انه ال absorption تاعهم inhibited by the presence of divalent or trivalent cations one of these cation is meanwhile they interfere with the calcium and magnesium presented in antacids absorption of iron , as the iron needs acidic PH between ca and iron absorption . امتصاص الحديد لانه عندي منافسة .

There by some patient education : these agents are effective for symptomatic control , however before dispensing it to any patient you should ask the patient if they use any other medications as some drug-drug interaction may occurred, also if they are used them for more than 2 weeks without results of symptomatic control this may considered as a problem and the patient needs medical referral because they may mask symptoms of other GIT disorders.

OTC medications, and they can be used for the acute treatment of acid reflux ("heartburn") and esophagitis.

هاي ال antacids مش بس لل peptic ulcer ممكن نستخدمها لل GERD ولل symptomatic control لل heartburn and dyspepsia ولقدام بالمواد التانية رح نشوف اذا صار ال heartburn اكثر من مرتين بالاسبوع بهاي الحالة كمان المريض بيحتاج الرجوع للطبيب .

Can antacid combined with other medications ?? yes like with H2-blockers

في عندي combinations والي فيها بنحصل على ال fastest onset of action by using antacids and ال the longer duration of action by using H2-blockers .

- In general, antacids should be administered in suspension form because this probably has greater neutralizing capacity than powder or tablet dosage forms.

هلاء برضه احنا بنعرف الاسم التجاري المعروف ب جافيسكون وهو عبارة عن sodium salt with alginate acid , طبعا ال mechanism of action وهون انه هاد ال antacid بعمل neutralizing لل hyperacidity وال presence of alginate بعمل high density يكون عندي it acts as a barrier barrier so it can prevent any reflux combination is good to prevent any heartburn or dyspepsia . suspension

## Antacid With Alginate

### ❑ Sodium Alginate (Gaviscon).



Now the drugs used for mucosal resistance ( these medications are not using in the market واهمها

Misoprostol :

- It is an analog of Prostaglandin E (inhibits secretion of acid and stimulates secretion of mucus and bicarbonate ) and it is approved for the prevention of NSAID-induced gastric ulcers .

misoprostol as prostaglandin analogue one of its contraindications or limits that it can cause uterine contractions thereby they may cause apportion ) لهيك لا يعطى للنساء خوفا انها ( illegal use . تكون حامل وبخاف يصير عليه .

Contraindicated in pregnancy , since it can stimulate uterine contractions and cause miscarriage .

وهو بس a prostaglandin analogue and highly effective in NSAID induced ulcer ليبيش؟؟؟

لانه ال NSAIDS بعملو inhibition لل PG production لهيك بنحاول to compensate باستخدام ال analogue .

- Prophylactic use should be considered in patients who are taking NSAIDs and are at moderate to high risk of NSAID-induced ulcers , such as elderly patients and those with previous ulcers .

ملاحظة : احنا هون بنشرح نظريات لكن عمليا ما بنستخدمها عشان لو مر علينا سؤال انه هل يمكن استخدام ال prostaglandin analogue for the treatment of ulcer احكيه اه صح لانه مش غلط مع هيك احنا ما بنستخدمه . because it is a banded medication .

الدوا الثاني هو ال sucralfate

- Creates a physical barrier that protects the ulcer from pepsin and acid so allowing the ulcer to heal , but it doesn't prevent NSAID-induced ulcer .

هاد الدوا غالبا موجود برا مش عنا , هاد الدوا رح يشتغل as physical barrier وانه بعمل زي coating لل gastric or duodenal mucosa بعمل طبقة وحاجز وبالتالي , it is helpful to prevent any acids , pepsin , or any irritant , to contact with the GIT , so it will enhance the ulcer healing .

- It is effective for the treatment of duodenal ulcers and prevention of stress ulcers , its use is limited due to the need for multiple daily dosing and drug - drug interactions .

however not prevent NSAID induced ulcer because we said that NSAIDs inducing ulcer not only locally effect but the most importantly and the major mechanism is the systematic effect even once we used this medication ( sucralfate which protect the GIT locally ) however the systematic NSAID effect still exists.

- Most common side effect is constipation

او ك هلاء هاد ال sucralfate هو عبارة عن aluminum salt يحتوي على المنيوم مع سكروز و هاد ال adverse effect هو constipation هاد اهم اشئ .

هاد الدوا بناخده as inactive وبده acidic media for its activation to form this barrier ولهيك شو المهم؟؟

- Because it requires an acidic pH for activation , sucralfate should not be administered with PPIs , H2 antagonists , or antacids .

لهيك هاد الدوا لازم ما ينعطى مع PPI , antacid , and H2-blokrs لانه ها الادوية يا بتعمل neutralizing like antacids or inhibit gastric acid secretion by using PPI or H2-blokrs limit the action of sucralfate .

هلء رح نحكي عن ال bismuth subsalicylate

- Ulcer healing mechanisms include an antibacterial effect, a local gastroprotective effect, and stimulation of endogenous PGs

bismuth itself has an anti bacterial effect thereby it هاد الدوا بالتحديد اله اكلتر من ميكانزم ال presents in the quadruple therapy for H.pylori infection also has mucosal protective effect meanwhile it may can enhance prostaglandin formation .

- It is used as a component of quadruple therapy to heal peptic ulcers .

However , we have to tell the patient such as ; انه بس ياخذ ممكن يصير عنره بعض المشاكل black tongue and black stool ( discoloration ) .

Bismuth salts impart a black color to stool and possibly the tongue with liquid preparations .

## Diarrhea

هلء الموضوع هاد رح يمر معانا بالتدريب وبال OTC وهو سهل وما رح نشرحه بالتفصيل .

هي من الحالات الي that easy to be treated by the OTC medications

The pharmacist needs to play an important role for the right using of medication to treat diarrhea.

- Diarrhea is an increased frequency of bowel evacuation, with the passage of abnormally soft or watery feces.

مش معقول المريض يفوت عالصيدلية عندي يقلي بدي دوا للاسهال احكيه تفضل هي loperamide هاد غلط لانهي ما اخدت منه هستوري في conditions ال anti-motility agents زي الوبيريميد is contraindicated and should be kept in your consideration بالعكس ممكن يجي واحد عنده diarrhea induced by infection or by poisoning here the anti-motility agents are contraindicated فاحنا صحيح الحالة تكون mild لكن في فئات عمرية معينة ممكن هاد الاسهال يكون مشكلة , واذا صرله اكلتر من يوم حيكون مشكلة لانه حيكون مربوط بجفاف .

## WHO definition of Diarrhea :

the passage of three or more loose or liquid stools per day (or more frequent passage than is normal for the individual).

فتبعاً للـ WHO حتياحكي انه عنده diarrhea بتصير لما once the patient has passage of loose or liquid stool more than 3 times in a day or more than the frequent passing of any normal individual health , ( المقصود انه احياناً في ناس بتقوت عالمام ثلاث مرات واحياناً اربعاً باليوم this is a normal habit for them ) بس اذا زادت عن الوضع الطبيعي اله يكون عنده diarrhea

Dose diarrhea consider as a mild condition ?

Yes . however in some cases it may lead to death especially in children ( infants) or elderly.

- Diarrheal disease is the second leading cause of death in children under five years old

ويمكن نشوف في بعض الدول انه من اسباب الوفاة ال dehydration عند الاطفال because of diarrhea

هله بدنا نحكي ك pathophysiology احنا عشان يصير في عندي watery stool and pass through the GIT رح يصير اما : increase in the GI motility ( اذا زادت حركة الامعاء زادت ال frequency ) , او liquidity in the GI وبالتالي بزيد ال there is an increase in the water secretion in the GI a decrease in the water intestine and all this water is excreted in the stool في بصير في reabsorption from the intestine in the GI ( لانه المفروض يتم امتصاص كل الماء بال GI لكن لما يصير في اسهال لا بزيد اما اخراج الماء او بقل اعاده امتصاصها ) كيف ؟

بصير زيادة بال water excretion مثلاً اذا صار عندي bacterial toxins , او اذا المريض صار عنده malabsorption زي الي عندهم lactose intolerance ما بقدر يخطمو اللاكتوز او يمتصوه فبصير اللاكتوز موجود بالامعاء وبزيد امتصاص الماء للامعاء ( يعني بتطلع من المحيط بالامعاء لتجويها ) وهاد بزيد ال excretion in the intestine .

Increase intestinal motility .

II. Increases water secretion .

III. Decreases water absorption

هـء مـصـوـص بـالـاطـفـال بـصـير عـنـدـهـم infection خـصـوصـي بـال shigella , salmonella مـمـكـن فـيـرـوسـات  
زي rotavirus coronavirus مـمـكـن كـمـان by certain protozoa like : ant ameba

Infection –

spread through contaminated food or water , or from person-to- person  
(poor hygiene) .

- Virus (Rotavirus , Norovirus) .
- Bacteria (Escherichia coli , Clostridium difficile , Campylobacter , Salmonella , Shigella )
- Protozoa (Entamoeba histolytica , Giardia lamblia)

مـمـكـن كـمـان بـعـض الـادوية تـعـمـلي diarrhea زي : metformin , antibiotic (es. Ampicillin ,  
( clindamycin الـي بـكـونـو broad spectrum بـالـاضـافـة لـل magnesium containing antacids او  
المـغـنـيـسيـوم لـحـالـه , NSAIDS , misopristol , cholinergic agonist , واي دوا بـزـيـدلي ال stimulation of  
) ACEI و مثـلا كـمـان ال GI motility by stimulation of Ach receptors may cause diarrhea  
مـلـاحـظـة القـائـمة هـاي مـش كـلـهـا حـفـظ !! ) و كـمـان ال digitalis وال colchicine الـي رـح نـاخـدـه بـالـثـيرـابي انـه مـن  
ال side effect الـه اسـهـال ,, عـشـان هـيـك سـؤال كـثـير مـهـم لـلمـريـض تـبـعـنا نـسـالـه هـل مـا كـل اكل مـن بـرا شـارب اشـي  
حـدا بـالـعـيـلـه عـنـدـه نـفس الـحـالـه to exclude if it is due to food poisoning , او هـل مـا خـد اي دوا ( مـمـكـن  
يـقـلـي اه والله دـكـتـور رـحـت عـنـد رـكـتـور الـاسـنـان واعـطـانـي كـلـيـنـدـامـايسـن عـشـان الـالـتـهـاب ) فـانـا بـعـرف انـه مـن اـهـم ال  
S.E لـهـاد الدوا هـو الـاسـهـال because it induce clostridium difficile overgrowth فـكـل هـاد  
be in consideration before prescribing any medication .



## II. Medications.

Laxatives  
 Antacids containing magnesium  
 Antineoplastics  
 Auranofin (gold salt)  
 Antibiotics  
   Clindamycin  
   Tetracyclines  
   Sulfonamides  
   Any broad-spectrum antibiotic  
 Antihypertensives  
   Reserpine  
   Guanethidine  
   Methyldopa  
   Guanabenz  
   Guanadrel  
   Angiotensin-converting enzyme inhibitors  
 Cholinergics  
   Bethanechol  
   Neostigmine  
 Cardiac agents  
   Quinidine  
   Digitalis  
   Digoxin  
 Nonsteroidal anti-inflammatory drugs  
 Misoprostol  
 Colchicine  
 Proton pump inhibitors  
 H<sub>2</sub>-receptor blockers

III. Diseases : ( Bile acid malabsorption , Inflammatory bowel disease , irritable bowel disorder , hyperthyroidism , diabetes mellitus ) .

inflammatory bowel : ممكن كمان بعض الامراض الي بتكون associated with malabsorption زي disease , irritable bowel syndrome

مع العلم انه ال irritable bowel syndrome يكون عندهم either constipation or diarrhea

IV. Food related : (Lactose intolerance , Fructose , Artificial sweeteners , Allergies , Alcohol abuse , change type of milk in infants , ) .

certain food related conditions زي ما حكينا عن اللاكتوز , وبعض الاحيان certain artificial sweeteners لانه عندهم osmotic effect that may cause diarrhea .

## V. Hormonal : ( intestinal carcinoid tumor)

يمكن يكون السبب hormonal factor زي ال intestinal carcinoma tumor هاي يكون عنا فيها مشكلة  
بال epithelial cells that line GIT that started to secret serotonin and other peptides that  
. responsible to increase intestine motility

بحالة مرض السكري ممكن يصير في يا اسهال يا امساك ممكن بسبب ال neuropathy بصير في عندي  
. lacking in the intestine motility

هلاء ال patient evaluation is very important before select the right treatment مثلا شو لازم  
نعمل اول اشي؟؟



- Patients with diarrhea should be questioned about the onset of symptoms, recent travel, diet, source of water, and medication use.
- Other important considerations include duration and severity of the diarrhea and the presence of abdominal pain or vomiting; blood in the stool; stool consistency, appearance, and frequency; and weight loss.
- Although most cases of diarrhea are self-limited, infants, children, elderly persons, and immunocompromised patients are at risk for increased morbidity.

We should ask the patient about : the onset of symptoms , if he receive any medications , if it is food induced , if he traveled may be it is a traveler diarrhea

مش بس بنسالة عن الاكل طبعا لازم نسالة عن الشرب .

نسالة كمان to describe the stool the diarrhea itself if there was any mucus or any blood and how is the consistency of the stool , if it is associated with fever or , vomiting as this points there may be an infection or it is just a poisoning

مثلا ممكن يجو يحكي انه الحج ( حدا كبير بالعمر ) عنده اسهال من اسبوعين وما شاف دكتور هون لازم اسال هل في weight loss لانه اذا كان في ممكن يكون alarm sign to have cancer هون بهاي الحاله او كان في history بالعيلة للاصابة بالسرطان هون بنحكي لا المريض بحاجة لتتظير لنعرف السبب .

### Dehydration:

Dehydration can occur when diarrhea is severe and oral intake is limited, particularly in the elderly and infants.

Other complications of diarrhea resulting from fluid loss include electrolyte disturbances, metabolic acidosis, and cardiovascular collapse.

Severe dehydration requires immediate admission to hospital and urgent replacement of fluid and electrolytes

### DEHYDRATION SYMPTOMS

The infographic illustrates six common symptoms of dehydration, each accompanied by a small icon: Thirst (a glass of water), Dry Mouth (an open mouth), Rapid Heartbeat (a heart with a pulse line), Headache (a head with a pulse line), Dry Skin (a hand with a pulse line), and Decreased Urination (a kidney with a pulse line).

بنرجع نحكي هو mild بس بالكبار بالعمر والاطفال ممكن يصيبهم dehydration or lose of electrolytes may also cause some metabolic disorders like metabolic acidosis that may lead to cardiovascular collapse ,, so , as fast as possible fluid replacement is very important !! هاي كتير مهمة في منهم عادي ممكن نعطيهم oral rehydration in some infections is good however في بعض الحالات الحادة sever acute diarrhea ما بنفع اعطيه غير I.V fluid replacement in hospitals

- 1.Control the loss of fluids.
- 2.Identify and treat cause
- 3.Provide symptomatic relief (antidiarrheal drugs)
- 4.Prevent acute morbidity

So , the goal of treatment as first priority we need to replace the fluid and electrolyte lose , plus we need to identify the cause in order to be treated it is very important to control the symptoms of the patient meanwhile we need to prevent any acute morbidity .

نبدأ بال non-pharmacological treatment طبعا هون بتيجينا اسالة زي مثلا : طفلي عمره شهر شهرين صار عنده اسهال وقفته الحليب او الرضاعة ,, طبعا هاد الحكي خطأ كبير خاصة بال infants بالعكس diet should be continued as normal this is very important لانه الطفل هاد من وين بده ياخده سوائل اذا قطعت عنه الحليب وهاد بزيد عنده ال dehydration .

- All patients should receive their normal diet or breast -feeding for infants during bouts of diarrhea because these do not make the diarrhea worse and may actually improve the condition

لكن عند كبار السن او ال adults هل في food to be avoided اه طبعا زي الجملة الي موجودة بالاسلايد الي بصير احيانا كمان بالغلط عشان يعوض الواحد الجفاف دغري بس يصيبه اسهال بروح بشرب عصير وهاد ممكن يزيد المشكلة لانه في سكر اصطناعي او زي عصير الجزر فيه الياف كتيرة هاد بزيد الطين بله لانه زي العصائر الي فيها simple suger هاد بزيد ال osmotic activity وبسحبلي زيادة مي لل intestine

- Fatty foods, foods rich in simple sugars (can cause osmotic diarrhea) , and spicy foods (may cause GI upset ) should be avoided.
- Caffeine-containing beverages, which may worsen the diarrhea, should also be avoided.

بتيجي الام بتقلك والله حليت لابني سكر وملح بمي هل هاد صح ؟ لا و لانه بزيڨال osmotic effect

هلء رح نحكي انه ال best treatment هو ال oral rehydration therapy او اسمه كمان ORS الي هو oral rehydration supplement موجود بالصيڨليات , هاي بتحتوي على electrolytes وبتحتوي على غلوكوز بس هڨول الشغلتين هم rightly calculated and measured يعني بشكل ڨقيق وصح لاني ما بڨي اياها تزيڨ الي تعملي osmotic diarrhea ولا تقل فما تفيد المريض , نعطي عنها بعض التفاصيل انها بتحتوي على صوڨيوم كلورايد وغلوكوز و بايكربونيت و بوتاسيوم , طبعاً ال glucose is added to enhance sodium reabsorption فاذا خلص هاد السشت من عند الام تقوم تعطي سكر وملح محلول هاد غلط it is completely contraindicated طبعاً هاي السشت بتنعطى للكبار وللصغار وكل عمر محڨد اله كم كاسة لازم يشرب وشو الجرعات المطلوبة .

## I. fluids and electrolytes replacement

### Oral Rehydration Therapy (ORT)

- ✓ Sachets of powder for reconstitution contain sodium as chloride and bicarbonate , glucose and potassium.
- ✓ Indications : Restore or prevent fluid and electrolyte loss due to mild to moderate diarrhea/vomiting or exercise .
- ✓ Use with caution in impaired renal functions and contraindication in renal failure .

However in patients who have renal impairment these supplement should be given in caution or may be contra indicated .

فقدان الشهية برضه ممكن يكون alarming sign خصوصي عند الكبار بالعمر , غالباً هي مشكلة نفسية اذا كان infected by some type of bacteria so they secrete toxins وبصير يحس بوجع ومغص كل ما ياكل فيقطع الاكل هاي الحالة .

هلء بدنا نحكي عن ال anti motility agents

- Loperamide binds to the opiate receptor in the gut wall, reducing propulsive peristalsis, increasing intestinal transit time and enhancing resorption of water and electrolytes
- Loperamide increases the tone of the anal sphincter, which helps reduce fecal incontinence and urgency.

والى هى ال most common used (Loperamide ) although it is an opioid but it is safe to be used ,, unlike other opioid like morphine it dose not cross the blood brain barrier so it lacks the CNS associated effect that opioids have

Poorly penetrate CNS → low risk of CNS side effects.

- It is popular, effective, safe non prescription antidiarrheal drug.

طبعا بشكل عام ال opioids بتعمل stimulation to the neuroreceptors in the GIT so it can reduce the intestinal parastasis and increasing intestinal transient time بمعنى اخر لما ازيد ال transient time كاني ببطئ حركة الامعاء وهاد بزيد اعادة امتصاص الماء من الامعاء .

- Adverse effects: GI distress → Constipation, abdominal cramps

كمناطق اى دوا بستخدمه لعلاج ال diarrhea ممكن يسبب constipation تفاصيل هاد الدوا حناخذها بالتدريب الى من اسمائه التجارية الفاكونتين واللوبيريوم , والمريض لازم ياخذ حبتين بالبداية وبعدين حبة بعد كل اخراج و لكن كتير مهم انه ما نزيد عن 8 حبات باليوم ما يعادل 16g اذا شاف المريض انه ما تحسن بحتاج يرج ع للدكتور ,, بنفس الوقت اذا كان سبب الاسهال infection or food poisoning فالدوا هاد contraindicated , لانه انت هيك بتمنع اذا كان سببه تسمم من اكل فيه بكتيريا انت بتمنعها انها تطلع by defecation وهاد بزيد ال secretion of bacterial toxins وبزيد المشكلة .

جوابا ع سؤال شهد انه لو المريض كان كبير بالعمر بعملوله فحص لوظائف الكلى والكبد والدم وبياخدو عينه من ال stool وبعملولها زراعة ليشوفو ال culturing بنفس الوقت لما بدهم يعطو تعويض سوائل بالوريد بدهم يحسبو لانه انت بدك fluid replacement meanwhile you should not deteriorate the liver or kidney انت ما بدك تعمله fluid overload ممكن تعيه بحالة ال infection بس بدك تنتبه انه بزيد الجفاف .

هلاء بدنا نحكي عن ال adsorbent

Adsorbents (such as kaolin-pectin) are used for symptomatic relief.

Adsorbents are nonspecific in their action; they adsorb nutrients, toxins, drugs, and digestive juices. Coadministration with other drugs reduces their bioavailability.

ومن الامثلة ال kaolin and pectin طبعا هم non specific in their mechanism of action they will adsorb ( nutrients, toxins and any fluid presented in the GIT ) فاكيد هون انه هاد لانه بعمل bioavailability of some medications so keep it in your mind adsorbtion ممكن ياثّر على ال انه لازم يكون في gap in time between the administration of any medication and the adsorbant .

They are less effective than antimotility agents

هلاء رح نحكي عن ال probiotic

- Probiotics are living microorganisms that can alter a patient's intestinal flora and may provide benefit in numerous GI diseases. Dietary supplements that may promote health by enhancing the normal microflora of the GI tract.

هدول صارو موجودين بالصيغيات للافال والرضع , هون احنا بناخد بكتيريا بس هاي البكتيريا نافعة لزيادة ال action of normal flora presented in the GIT مثلا ال lactobasilus acidofellus هادنوع من البكتيريا acid producing bacteria presented in cultures can be administered orally and can be helpful in treatment of diarrhea



- Lactobacillus acidophilus (Lactinex) is an acid-producing bacterium in culture administered orally for simple diarrhea caused by antibiotics, infection, irritable colon,
- Lactobacillus bacteria help to reestablish normal intestinal flora. The capsules, tablets, or granules may be taken or mixed with cereal, food, juice, or water

هذه الادوية الثانية specific treatment once we know the cause is an infection

### V. specific treatment

- Antibiotics might help treat diarrhea caused by bacteria or parasites.
- If a virus is causing your diarrhea, antibiotics won't help. (mainly self-limiting) .
- Treating underlying conditions (diseases and medications) .

لازم نعطي antibiotic او نعطي anti protozoa اذا السبب protozoa بينما لل virus مافي antiviral  
هو self limited يعني الواحد يتشافى لحاله بس يحتاج fluid replacement .

Additional treatments depending on the cause some needs anti-emetic , antispasmodic  
وادوية مغص وادوية استفراغ هاد الحكي بعد ما نكون قيمنا حالة المريض كثير منيح عشان تعيه الدوا المناسب ,

### VI. Additional treatment may be needed

- Antiemetics
- Antispasmodics



لانه اذا ما كنت متأكد من سبب الاسهال لا تعطيه اي شي اضافي اطلب منه يروح للمستشفى لكن اذا استفرغ بس مرة مرتين وما حسيت في خطر بالحالة انت بتقيمها او يفضل الطبيب الاحسن منك بالتقيم هو يعطي الدواء المناسب او الدواء الاضافي .

هلء ال patient education لاي دوا انه not exceeding the recommended dose زي البيرامايد كمان adequate fluid intake اهم اشئ و كمان , report any adverse effect of any medication ولا زمانت تساله وتحكيه يحكيك اي اعراض اضافية صايرة مع الاسهال لتقدر تحدد الادوية , وزئ ما حكيئا anti-infection , anti-emetic , anti-spasmodic to be avoided اذا كان الاسهال سببها تسمم او

## Patient education

Patients taking antidiarrheal drugs should be instructed regarding:

- Not exceeding the recommended dosage; short-term only
- Adequate fluid intake
- Reporting side effects or complications to the physician immediately, or if symptoms persist
- Not taking these medications if diarrhea is caused by infection or food poisoning.



اذا بدك تعالج الاسهال باشياء طبيعية زي الاسهال مرامية عادي بس الاغلب بيعطو نشويات الي هي complex suger ممكن تخفف الاسهال لكن ال simple suger ممكن يعمل ويزيد من الامتحان