

## Eighth Lecture

### 8. Digestive system (Cont'd)

#### *Summary of previous lectures*

*In the previous lectures we talked about the basic elements of the medical word: word root, combining form, suffix, and prefix. The meaning of a word is determined by how these elements are combined. Detailed information about suffixes is mentioned. Suffix linking and suffix types are explained in detail and many examples related to the surgical, diagnostic, pathological, grammatical and plural suffixes are also provided. Detailed information about prefixes is also mentioned. Prefix linking and prefix types are explained in detail and many examples related to different types of prefixes are provided.*

*The basic structural and functional organization of the body from the cellular level to the organism level is also presented. Additionally, terms used to describe planes of the body, body cavities, quadrants and regions of the abdominal cavity, and divisions of the spinal column are presented. These terms are considered as an essential part of medical terminology and are used in all body systems. We moved on to talk about the body systems in detail.*

*Starting with the digestive system, also called the gastrointestinal (GI) system, it is mentioned that it consists of a digestive tube called the GI tract or alimentary canal, and several accessory organs whose primary function is to break down food, prepare it for absorption, and eliminate waste. The GI tract, extending from the mouth to the anus, varies in size and structure in several distinct regions.*

#### 8.1. Introduction

In “Digestive system”, we talked about the main parts of the digestive system in addition to some anatomical and physiological Key terms. In this lecture, more terms related to the digestive system are introduced.

## 8.2. Medical Word Elements<sup>173</sup>

This section introduces combining forms, suffixes, and prefixes related to the digestive system. Word analyses are also provided.

| Element (Meaning)           | Word (Arabic <sup>174</sup> )                   | Pronunciation <sup>175</sup> | Analysis  |
|-----------------------------|---|------------------------------|---|
| <b>Combining Forms</b>      |   |                              |   |
| <b>Mouth:</b>               |   |                              |   |
| or/o<br>(mouth)<br>stomat/o | or/al<br>(فموي)<br>stomat/itis<br>(التهاب الفم) | 'ɔ:rəl                       | pertaining to the mouth<br>-al: pertaining to<br>inflammation of the mouth<br>-itis: inflammation   |
| gloss/o<br>(tongue)         | gloss/ectomy<br>(استئصال اللسان)                | glɒ'sektəmi                  | removal of all or part of the tongue<br>-ectomy: excision, removal  |
| lingu/o                     | lingu/al<br>(لساني)                             | 'lɪŋgwəl                     | pertaining to the tongue<br>-al: pertaining to  |
| bucc/o<br>(cheek)           | bucc/al<br>(شديقي)                              | 'bʌk əl                      | pertaining to the cheek<br>-al: pertaining to   |
| cheil/o<br>(lip)            | cheil/o/plasty<br>(رأب الشفة)                   | 'kaɪlə,plæsti                | surgical repair of a defective lip<br>-plasty: surgical repair  |
| labi/o                      | labi/al<br>(شُفوي، شُفوي)                       | 'leɪbiəl                     | pertaining to the lips, particularly the lips of the mouth<br>-al: pertaining to  |
| dent/o<br>(teeth)           | dent/ist<br>(طبيب الأسنان)                      | 'dentɪst                     | specialist who diagnoses and treats diseases and disorders of teeth<br>-ist: specialist   |
| odont/o                     | orth/odont/ist<br>(طبيب تقويم الأسنان)          | ,ɔ:θə'dɒntɪst                | dentist who specializes in correcting and preventing irregularities of abnormally positioned or aligned teeth<br>orth: straight<br>-ist: specialist |

<sup>173</sup> Medical Terminology Systems - A Body Systems Approach: Digestive System – Medical Word Elements p. 112

<sup>174</sup> <http://www.emro.who.int/Unified-Medical-Dictionary.html>

<sup>175</sup> Oxford Advanced Learner's Dictionary, 8<sup>th</sup> ed. or: <http://dictionary.reference.com/>

|   |  |                             |   |
|---|--|-----------------------------|---|
| gingiv/o<br>(gum)   | gingiv/ectomy<br>(قَطْعُ اللِّثَةِ)                                | ˌdʒɪndʒəˈvektəmi            | excision of diseased gingival tissue<br>-ectomy: excision, removal<br>Gingivectomy is performed as a surgical treatment for periodontal <sup>176</sup> disease. |
| sial/o<br>(saliva, salivary gland)                        | sial/o/lith<br>(حَصَاةٌ لُعَابِيَّةٌ)                              | saiəˈleɪθ                   | calculus <sup>177</sup> formed in a salivary gland or duct<br>-lith: stone, calculus  |
| Oesophagus,<br>Pharynx, and<br>Stomach:                   |  |                             |   |
| esophag/o<br>(oesophagus)                                 | esophag/o/scope<br>(مِنْظَارُ المَرِيءِ)                           | iˈsɒfəgəskəʊp               | instrument used to examine the oesophagus<br>-scope: instrument for examining   |
| pharyng/o<br>(pharynx<br>(throat))                        | pharyng/o/tonsill/itis<br>(الْتِهَابُ البُلْعُومِ واللُّوزَتَيْنِ) | ˌfærɪŋˈgɒ-<br>ˌtɒnsəˈlaɪtɪs | inflammation of the pharynx and tonsils<br>tonsill: tonsils<br>-itis: inflammation  |
| gastr/o<br>(stomach)                                      | gastr/algia<br>(وَجَعُ المَعِدَةِ)                                 | gæˈstrældʒiə                | pain in the stomach; also called stomach-ache<br>-algia: pain   |
| pylor/o<br>(pylorus)                                      | pylor/o/spasm<br>(تَنْسُّجُ البَوَّابِ)                            | paiˈlɒrəʊˈspæzəm            | involuntary contraction of the pyloric sphincter of the stomach, as in pyloric stenosis<br>-spasm: involuntary contraction, twitching                           |
| Small<br>Intestine:                                       |  |                             |   |
| duoden/o<br>(duodenum<br>(first part of small intestine)) | duoden/o/scopy<br>(تَنْظِيرُ الإِثْنَا عَشْرِي)                    | ˌdjuːəˈdɛnskəpi             | visual examination of the duodenum<br>-scopy: visual examination  |
| enter/o<br>(intestine (usually small intestine))          | enter/o/pathy<br>(اعْتِلَالٌ مِعْوِي)                              | ˌɛntəˈrɒpəθi                | disease of the intestine<br>-pathy: disease   |

<sup>176</sup> Periodontal: /ˌperiəˈdɒntl/ related to or affecting the parts of the mouth that surround and support the teeth

<sup>177</sup> Calculus: /ˈkælkjələs/ (pl. calculi /ˈkælkjələɪ/) an abnormal concretion in the body, usually formed of mineral salts and most commonly found in the gallbladder, kidney, or urinary bladder. Also called stone

|  |  |                |   |
|--|--|----------------|---|
| jejun/o<br>(jejunum <sup>178</sup><br>(second part of<br>small intestine)) | jejun/o/rrhaphy<br>(رَفُّو الصَّائِمِ)       | dʒɪˈdʒu:nɒrəfi | suture of the jejunum<br>-rrhaphy: suture   |
| ile/o<br>(ileum (third part<br>of small intestine))                        | ile/o/stomy<br>(فَعْرُ اللَّفَائِفِ)         | ˌɪliˈɒstəmi    | creation of an opening<br>between the ileum and the<br>abdominal wall<br>-stomy <sup>179</sup> : forming an<br>opening (mouth)<br>An ileostomy creates an<br>opening on the surface of<br>the abdomen to allow<br>faeces to be discharged<br>into a bag worn on the<br>abdomen. |
| Large Intestine:   |  |                |   |
| append/o<br>(appendix)   | append/ectomy<br>(اسْتِئْصَالُ الرَّائِدَةِ) | ˌæpenˈdektəmi  | excision of the appendix<br>-ectomy: excision, removal<br>Appendectomy is<br>performed to remove a<br>diseased appendix in<br>danger of rupturing.  |
| appendic/o   | appendic/itis<br>(الْتِهَابُ الرَّائِدَةِ)   | əˌpendəˈsaɪtɪs | inflammation of the<br>appendix<br>-itis: inflammation  |
| col/o<br>(colon)   | col/o/stomy<br>(فَعْرُ الْقَوْلُونِ)         | kəˈlɒstəmi     | creation of an opening<br>between the colon and the<br>abdominal wall<br>-stomy: forming an<br>opening (mouth)<br>A colostomy creates a<br>place for faecal matter to<br>exit the body other than<br>through the anus.  |
| colon/o  | colon/o/scopy<br>(تَنْظِيرُ الْقَوْلُونِ)    | ˌkɒləˈnɒskəpi  | visual examination of the<br>colon<br>-scopy: visual examination<br>Colonoscopy is performed<br>with an elongated<br>endoscope called a<br>colonoscope.   |

<sup>178</sup> Jejunum: /dʒɪˈdʒu:nəm/ the second part of the small intestine

<sup>179</sup> When the suffix –stomy is used with a combining form that denotes an organ, it refers to a surgical opening to the outside of the body.

|                                       |  |                    |  |
|---------------------------------------|--|--------------------|--|
| sigmoid/o<br>(sigmoid colon)          | sigmoid/o/tomy<br>(بِضْعُ السِّيْنِيِّ)                | 'sɪgmɔɪdɔtəmi      | incision of the sigmoid colon<br>-tomy: incision   |
| Terminal End of Large Intestine:      |  |                    |  |
| rect/o<br>(rectum)                    | rect/o/cele<br>(قَيْلَةٌ مُسْتَقِيمِيَّة)              | 'rektə,sil         | herniation <sup>180</sup> or protrusion of the rectum; also called proctocele<br>-cele: hernia <sup>181</sup> , swelling                               |
| proct/o<br>(anus, rectum)             | proct/o/logist<br>(طَبِيبُ الْمُسْتَقِيمِ وَالشَّرَجِ) | prɒk'tɒlədʒɪst     | physician who specializes in treating disorders of the colon, rectum, and anus<br>-logist: specialist in the study of                                  |
| an/o<br>(anus)                        | peri/an/al<br>(مُحِيطٌ بِالشَّرَجِ)                    | perɪ'eɪnl          | pertaining to the area around the anus<br>peri-: around<br>-al: pertaining to  |
| Accessory Organs of Digestion:        |  |                    |  |
| hepat/o<br>(liver)                    | hepat/o/megaly<br>(صَخَامَةُ الْكَبِدِ)                | 'hepətəʊ'megəli    | enlargement of the liver<br>-megaly: enlargement   |
| pancreat/o<br>(pancreas)              | pancreat/o/lysis<br>(تَحْرُبُ الْبَنْكَرِيَّاسِ)       | 'pæŋkriətəʊ'læɪsɪs | destruction of the pancreas by pancreatic enzymes<br>-lysis: separation; destruction; loosening  |
| cholangi/o<br>(bile vessel)           | cholangi/ole<br>(قُنَيْةٌ صَفْرَاوِيَّة)               | kɒ'læŋziəʊl        | small terminal portion of the bile <sup>182</sup> duct<br>-ole: small, minute  |
| chol/e <sup>183</sup><br>(bile, gall) | chol/e/lith<br>(خِصَاةٌ صَفْرَاوِيَّة)                 | 'kəʊləɪθ           | gallstone<br>-lith: calculus, stone<br>Gallstones are solid masses composed of bile and cholesterol that form in the gallbladder and common bile duct. |

<sup>180</sup> Herniate: /'hɜ:ni,et/ to protrude through an abnormal bodily opening

<sup>181</sup> Hernia: /'hɜ:niə/ a medical condition in which part of an organ is pushed through a weak part of the body wall

<sup>182</sup> Bile /baɪl/ the greenish brown liquid with a bitter unpleasant taste that is produced by the liver

<sup>183</sup> The e in chol/e is an exception to the rule of using the connecting vowel o

|  |  |                  |   |
|--|--|------------------|---|
| cholecyst/o<br>(gallbladder)                                     | cholecyst/ectomy<br>(اسْتِنْتِصَالُ الْمَرَارَةِ)            | ,kɒlɪsɪ'stektəmi | removal of the gallbladder<br>-ectomy: excision, removal<br>Cholecystectomy is performed by laparoscopic <sup>184</sup> or open surgery.  |
| choledoch/o<br>(bile duct)                                       | choledoch/o/plasty<br>(رَأْبُ قَنَاةِ الصَّفْرَاءِ)          | ,kɒlɪdɒkɒplæsti  | surgical repair of the common bile duct<br>-plasty: surgical repair   |
| Suffixes   |  |                  |   |
| -emesis<br>(vomit)   | hyper/emesis<br>(فَيْءٌ مُفْرِطٌ)                            | haɪpə'emɪsɪs     | excessive vomiting<br>hyper-: excessive, above normal   |
| -iasis<br>(abnormal condition (produced by something specified)) | chol/e/lith/iasis <sup>185</sup><br>(تَحَصُّنٌ صَفْرَاوِيٌّ) | ,kəʊləɪ'taɪəsɪs  | presence or formation of gallstones in the gallbladder or common bile duct<br>chol/e: bile, gall<br>lith: stone, calculus<br>When gallstones form in the common bile duct, the condition is called choledocholithiasis. |
| -megaly<br>(enlargement)   | hepat/o/megaly<br>(ضَخَامَةُ الْكَبِدِ)                      | ,hepətəʊ'megəli  | enlargement of the liver<br>hepat/o: liver<br>Hepatomegaly may be caused by hepatitis or infection, fatty infiltration (as in alcoholism), biliary <sup>186</sup> obstruction, or malignancy <sup>187</sup> .           |
| -orexia<br>(appetite)  | an/orexia<br>(فَقْدُ الشَّهِيَّةِ)                           | ,ænə'reksɪə      | loss of appetite<br>an-: without, not<br>Anorexia can result from various conditions, such as adverse effects of drugs or various physical or psychological causes.   |

<sup>184</sup> Laparoscopy: /,læpə'rɒskəpi/ an examination of the inside of the body using a tube-shaped instrument that can be put through the wall of the abdomen

<sup>185</sup> The i in pelv/i/meter and pelv/i/metry and the e in chol/e/lithiasis and chol/e/lith are exceptions to the rule of using the connecting vowel o

<sup>186</sup> Biliary: /'bɪliəri/ relating to bile or to the bile duct

<sup>187</sup> Malignancy: /mə'ɪgnənsi/ a malignant mass of tissue in the body; tumour

|                                 |   |                   |  |
|---------------------------------|---|-------------------|--|
| -pepsia<br>(digestion)          | dys/pepsia<br>(عُسْرُ الهَضْمِ)                         | dɪs'pepsiə        | epigastric discomfort felt after eating; also called indigestion<br>dys-: bad; painful; difficult      |
| -phagia<br>(swallowing, eating) | aer/o/phagia<br>(بَلْعُ الهَوَاءِ)                      | ˌeərə'feɪdʒiə     | swallowing air<br>aer/o: air   |
| -prandial<br>(meal)             | post/prandial<br>(بَعْدَ الأَكْلِ)                      | ˌpəʊst'prændiəl   | following a meal<br>post-: after, behind   |
| -rrhea<br>(discharge, flow)     | steat/o/rrhea<br>(إِسْهَالٌ دُهْنِيّ)                   | stiˌætə'riə       | excessive amount of fat discharged in faecal matter<br>steat/o: fat                                    |
| Prefixes                        |   |                   |  |
| dia-<br>(through, across)       | dia/rrhea<br>(إِسْهَالٌ)                                | ˌdaɪə'riə         | abnormally frequent discharge or flow of fluid faecal matter from the bowel<br>-rrhea: discharge, flow |
| peri-<br>(around)               | peri/sigmoid/itis<br>(الْتِهَابُ حَوَائِطِ السِّيْنِيّ) | pəri'sɪgmɔɪdaɪtɪs | inflammation of peritoneal tissue around the sigmoid colon<br>peri-: around<br>-itis: inflammation     |
| sub-<br>(under, below)          | sub/lingu/al<br>(تَحْتَ اللِّسَانِ)                     | sʌb'liŋgwəl       | pertaining to the area under the tongue<br>lingu: tongue<br>-al: pertaining to                         |