

Subject :

← COPD treatment *

Oxygen -1

← Medications -2

Broncho dilators -1

Corticosteroids -2

Antibiotics -3

first sign of infection •

yellow or green sputum •

← other drugs to treat associated symptoms *

Fluid accumulation ← Diuretics •

بجفوا الألم ← Analgesics •

bloody cough ← Cough suppressants •

stress ← Anxiolytics •

← others

Bulectomy or lung reduction -1

pulmonary rehabilitation -2

Exercise •

Oxygen •

Nutritional support •

Intermittent mechanical ventilator support -3

relaxation techniques -4

Breathing techniques •

→ → →

Subject :

[Fluid cases] clearing airway passages - 3

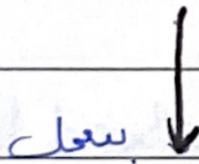
- postural drainage
- chest percussion
- controlled coughing
- Tracheal suctioning

⇐ COPD Complications *

hypoxia ١١ hypoventilation ١١ ١١

↓
* كَيْفَ الْجِسْمِ يَسْتَجِيبُ لِذَلِكَ ؟

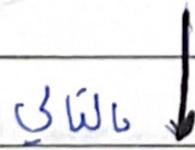
Vasoconstriction



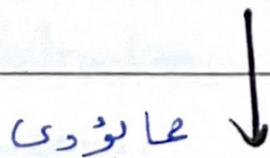
hypoxic vasoconstriction

↓
سَكْرَةُ بَوْدِي

pulmonary hypertension



increase the workload on the right ventricle ↑ *



right ventricular hypertrophy & failure (cor pulmonale)

Subject :

Emphysema disease

Inflation

Lungs ضيق بال

Chronic lung obstruction & destruction

CO2 no high content air trapping

suffocating feeling

great distress from the inability to breath

difficult breathing severe pain

unknown cause

frequently associated with heavy cigarette smoking

COPD Causes alpha1-antitrypsin deficiency

prone to alveolar destruction characteristic emphysema

long-term exposure environmental allergens chronic

Subject :

[Frequent complication of chronic bronchitis] => Emphysema *

Inflammation داخل ال Lungs

breaking down => Lung walls

adjacent alveoli fuse

the lungs lose their elasticity

Emphysema * هو زي ما شرحنا بال inflammation

Irritant inside the alveoli -1

inflammatory process

cytokines => neutrophils activation

producing

elastase, proteases => enzymes

elastin => breaking down

elasticity => elastin *

recoiling : انه بعد عطف ال inhalation نفس

exhalation

airway تعرف مع تفسر معي تفتح

[keeping the airway open]

integrity ال الveoli wall

Subject :

* لما يتعسر الـ elastin عن طريقه الـ elastase

Connective tissue

* الـ alpha 1-antitrypsin. يعسر علينا 1 - airway will be collapsed

alveoli will damage

↓ decrease surface area for gas exchange. So يؤدي الى

* alpha 1-antitrypsin ← هاد بيتم انتاجه بالـ liver

لـ liver disease يصيبه يزيد لو واحد عنده

- يحترق : anti-protease enzyme

له ضد تكسر الـ enzyme

- يدخلها الجسم عن طريق الـ elastase لأنه لا حاجة للـ elastin

- الـ deficiency فيه يؤدي الى زياده الـ elastase level breaking down of elastin.

Subject :

← Bernouli principle *

تنبأ هلا حكيما زنة (container) لا مكانه صفيح بالتالي ال (pressure) بكونه يكون عالي

← نفس الطريقة

← لو ما يكونه عنا (low pressure) بال (lung) عكس تا تشر ال (elastic tissue)

الوجود بال (air way)

← فاذا ال (air way) فقدت ال (elastic tissue) بيسر عنا ←

1- the airway will be collapsed during exhale (against the low)

2- سبب ← (air trapping)

← emphysema *

لؤدي الى ←

- 1- hypoxemia
- 2- hypercapnia

early stage in chronic bronchitis & late stage in emphysema

يعتبروا ←

← emphysema * الوعلا تة بال (morphology changes) ←

→ حنكبي عنضم الصفحة الرجاى " ما هل تير "

Subject:

Lungs in the upper part is affected - 1 *

Centriacinar emphysema (= بصير اسفلا)

Lungs in the lower part is affected - 2

panacina emphysema (= بصير اسفلا)

parts near to pleura is affected - 3

Distal acinar emphysema (= بصير اسفلا)

symptoms & signs *

↑ increased rate of breathing - 1

building up of CO₂ - 2

right-sided heart failure - 3

Cyanosis - 4

abnormal respiratory sounds → called [rales] ← permanent expansion of the chest - 5

hypoventilation reduces oxygenation - 6

! إذا لم ينجح العلاج (= بصير اسفلا) *

irreversible damage to the lungs - 1

breaking down of alveolar walls - 2

the surrounding blood capillaries are damaged - 3

Subject :

Diagnosis & treatment of Emphysema *

← treatment -

eliminating the source of the irritation = لإزالة

quit smoking - 1 ← تجنب

avoiding

polluted air containing smoke, fumes, & irritating dust - 2

3 - المرضى المعرضين لخطر الإصابة بالأمراض ← ozone warning فلا تخرجوا

when the ozone level is high. ← outdoor activity لا

← medications لا ← علاج disease لا المرض

clear mucus from the lungs help prevent infection ←

metaproterenol. - 2

albuterol - 1

8 ← teaching individuals لا التعليم ← physical therapy *

[to use all the possible muscles for respiration in the abdomen & chest wall]

Subject :

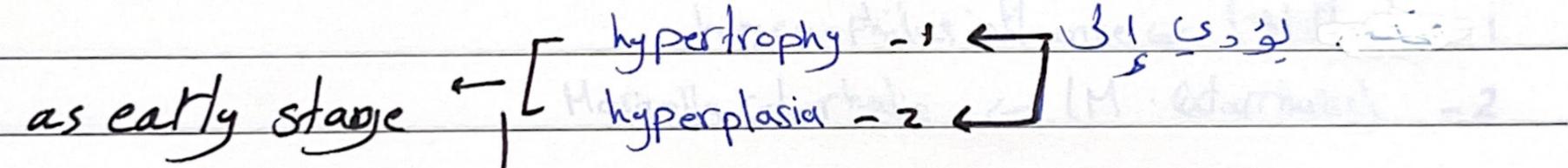
← as chronic Bronchitis ⇒ emphysema

- التهاب (inflammation)

- زيادة ال (mucous secretion)

- تضيق (narrowing) في (air way)

- لكنه زي ما قلنا قبل كم صفحة - 31 - 8 التعرض المستمر لل (irritants)



- 1 - mucous glands
- 2 - goblet cells

- ciliary dysfunction

← (excess mucous)
 ⇒ chronic Bronchitis

- hardening & less mobility of the cilia

which make the mucous hard to be removed

- حبس عن مكانه ⇒ air trapping ⇒ يسبب ال (mucous accumulation)

← حبس زي يادف بلا CO2 داخل ال lung

Subject :

f ↓ Less O₂ inhaled | (= سبب) *
 ↓ Less CO₂ exhaled

سبب له

- ↓ decrease in pO₂ ← hypoxemia - 1
- ↑ increase in pCO₂ ← hypercapnia - 2

increasing ↑ ← pneumonia ← تؤدي إلى ← other causes *
 the risk of infection with

- Haemophilus influenzae ← (H. flu) - 1
- Moraxella catarrhalis ← (M. catarrhalis) - 2

نتيجة ل disease ← "قرىنا نظاها نوحون" ضابط [slide]

← pulmonary tuberculosis -
 Mycobacterium ← سبب ← chronic respiratory infection ← tuberculosis.

Inhaling droplets from the respiratory ← نتيجة ← secretion ⇒ created by ⇒ coughing, sneezing, talking

asymptomatic patient عادة يكون

و لو (إذا) ← symptomatic ← الأكل عاد ال patient يكون

- children - 1 ← weak immune system
- HIV patient - 2 ←

Subject : _____

* كيف الجسم يستجيب ← انه يجرى ← Cell mediated hypersensitivity response

* bacteria → blood → يجرى ← spread into brain - 1

meninges - 2

Liver - 3

Kidney - 4

bone marrow - 5

* Infection ← يجرى في Lung tissue ← with airborne bacteria

← Mycobacterium tuberculosis ← (Primer)

* يتأثر بشكل خاص ← specific ← alveolar tissue

* M. tuberculosis ← 3 halos ← alveoli

- 1 Elimination

- 2 bacteria stays inside the macrophages & retention

↳ latent TB

- 3 active TB & active infection

Subject :

← TB pathophysiology*

← bacteria بقوت لا lungs ← يتم تحفيز ال macrophage ←

تنتج [phagocyte them] Mycobacteria ← inhibition لا

← lysosomes activity لا macophages لا bacteria لا

reproduction ← ← phagocytosis لا others that get released

← يودي إلى macrophages ← تؤدي إلى distruction لا lungs ←

← 1 - granuloma

← 2 - tuberculoma

- SI. ال (cases) ← ال infection (primary) و يسير

(progressive infection)

tuberculosis pneumonia ← يسير

← يسير يودي إلى ←

* local infection

* [infection disseminates]

to other organs:

1 - liver

2 - kidney

3 - brain

Subject :

Latent TB patient = 5% *

main cause ↓

secondary infection.

↓ يدت بعد دكتور

Primary infection.

↓ مثال

depressed immune system ↓

↳ HIV

Chemotherapeutics -2

all ⇒ smoking & DM -3

increase the risk

⇒ treatment & diagnosis *

(12) weeks ⇒ culture of organism -1

several month ⇒ DNA amplification -2

detect presence of antibodies ⇒ (tuberculin) ID Injection ⇒ 3

← treatment ↓ -

elimination of the tuberculosis bacilli -1

ethambutol -3 rifampin -2 isonized -1 ⇒ primary drugs -2

pyrazinamide -4

active tuberculosis ⇒ 1st line of treatment

⇒ rifampin & isonized

4 شهور

Subject :

* persons in contact with patient treated prophylactically by isonized

* drug resistance => some are treated with drug => drug susceptibility test

* آخر موضوع * قريبا جدا * Lung Cancer =>

* Leading cause => cancer death in women & men

* 28% death related to all types of cancer

* 80% of lung cancer is due to cigarette smoking => نتيجة

10 times more common in smokers versus non smokers

* Causes of lung cancer -1 inhalation of carcinogens
* occupational hazard among workers
* air pollution

1- Arsenic

2- Chromium

3- Nickel

4- Vinyl chloride

5- exhausted gases

6- Industrial fumes

Subject :

* Lung Cancer = عسر يؤدي إلى airway blockage ← سعال

← malignant tumor
لحمية يتطور في Lumen of the bronchus

- collapses for lack air ⇔ the effected part of the lung

- ⇔ airway obstruction is danger

- death نتيجة ال complications من obstruction أو نسيجة

effect ال metastatic tumors

ال Lung Cancer ينقسم إلى قسمين

! لا = Non - small cell carcinoma = (أو) small cell carcinoma

* ينقسم إلى ثلاثة أقسام

1 - Squamous cell carcinoma

ال (men) أكثر من ال (women)

← نتيجة ال (smoking)

← سعال (detection) عسر حرق عود ال (sputum)

← ولسان ← سعال للز سفينة وديس

ال (major bronchi) وال (pulmonary lymph nodes)

2 - AdenoCarcinoma

ال non smokers من north American women

← سعال (malignant) ← لأنه سعال ال (patient) يصير عسر ال (accumulation) ال (masses)

(Associated) مع ال (pleural fibrosis) من (scarring with poor prognosis)

Subject: / /

Large Cell Carcinoma - 3

Large polygonal cell ← highly neoplastic

difficult to categorize

periphery of the lung → هاي تحت لب
larger airways & bronchi → لب

disfand sides → انما تنشر جان اذا قام بالجنها

Small Cell Lung Carcinoma → السرطان الثاني

Characterized → وجود ال oval cells أو lymphocytes على مكان

small cell cancer → المكان الي صار فيه

bronchial epithelium → ال ال تعرض Tumors ال nonexocrine cells → السرطان

secretion ال ال products → ال ال [SIADH] -
[Syndrome of inappropriate antidiuretic hormone secretion]

Cigarette Smoking → السرطان

70% → السرطان بسرطان → net → السرطان ال ال أذا كانه أخرى بالجسم
مثل ال brain

Subject :

⇐ diagnosis & treatment *

⇐ diagnosis -

relationship with chest radiography -1

detecting cancer cells in the sputum -2

washings from the bronchoscopy examination -3

a needle biopsy of the tumor -4

biopsy of lymph nodes -5

⇐ ultrasonography & MRI & CT scan *

for the brain ←

locate the lesions ↓

Average age for diagnosing lung cancer is age 60 *

Subject: ... آخ slide الى واصل هو الوخبة بريرة *

← treatment

-1 surgery

-2 radiation therapy with chemotherapy

-3 بد هم تكا يثونوا وية ماره met ← عا 1- breast

-2 GI

-3 kidney

-4 female

reproductiv syste