

MILIARY TB

هو حاله خاصه من الدرن المنتشر فى الجسم عن طريق الدم

TB bacilli spread to many organs by hematogenous spread

ودى ياما بتحصل مع ال primary TB فى حالة انهيار المناعه (غالبا بيكونوا اطفال)

او بتحصل مع ال Post-primary TB

برضه فى حالة انهيار او ضعف المناعه (غالبا بيكونوا adults)

ال TB bacilli بتوصل اعضاء كثير ،، طبعا زى ال

#Lungs (diffuse involvement) not only the upper lung zones With diffuse miliary pattern

#Liver : hepatomegaly with elevated liver enzymes \pm jaundice and high bilirubin

#Peritoneum : TB peritonitis

#bones & joints

#Lymph nodes

#CNS particularly the meninges (meningitis)

#eyes

#blood : Anemia , leucocytosis (lymphocytosis) ,Pancytopenia may occur

ليه سمي بهذا الاسم ويبدل على ايه !؟

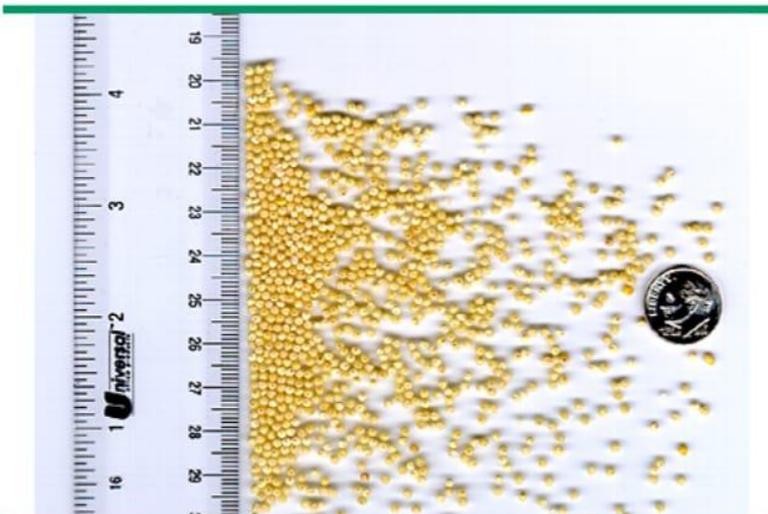
Miliary

ده مشتق من كلمة

Millet

وده نبات اسمه الدخن (بضم الدال) وده نبات
بيطلع بذور كثير صغيره جدااا حجمها قريب من
رمان البلى ،، والعالم اللي اكتشف ال miliary TB
وجد ان منظر ال miliary TB فى الرنتين واخذ
نفس منظر البذور دى

Comparative size of millet seeds



Millet seeds from which the name miliary tuberculosis derives compared to the size of a dime (right) and a centimeter scale (left). These correspond to the approximate size of miliary lesions seen on chest radiograph.

واللى بيظهر فى الاشعه هو

Innumerable micronodules (tiny nodules all over the whole lung fields)

وده نوع من انواع ال Interstitial shadow

واسمه

(Micronodular pattern (miliary pattern or shadow



PRESENTATION أعراض المرض

- Subacute (over weeks I.e. Over > 2 weeks)
- Acute (< 2 weeks)

#Constitutional symptoms

- ★ Fever (esp. At night)
- Or Fever of Unknown origin
- ★ Night sweats
- ★ Weight loss
- ★ Anorexia
- ★ Weakness/malaise

+

#Chest features

- ★ Cough
- ★ Pleuritic chest pain
- ★ Dyspnea {{{ hypoxia}}}

#GIT

★ Abdominal pain (liver infiltration) mainly Right upper quadrant pain

★ Vomiting & diarrhea (brief)

★ Jaundice may occur in some cases

#CNS : prominent headache due to meningitis

ازای نشخص ال Miliary TB !؟

أعراضه

Non - specific

وتفریقها من ال TB العادی صعب غالبا ولكن ال

Signs may differentiate

↓↓↓↓↓↓↓↓↓↓

Organomegaly (hepatomegaly ± splenomegaly)

Ascitis

Jaundice (mild in some cases)

Neurologic

Patient may be confused or C/O of intermittent confusion

+

Signs of meningeal irritation (Neck rigidity)

على مستوى ال

Chest

Diffuse fine scatted crepitations or bronchi

Or signs of pleural effusion (decreased air entry + stony dullness)

كله ده لازم ببقى فى وجود

Risk factors for TB

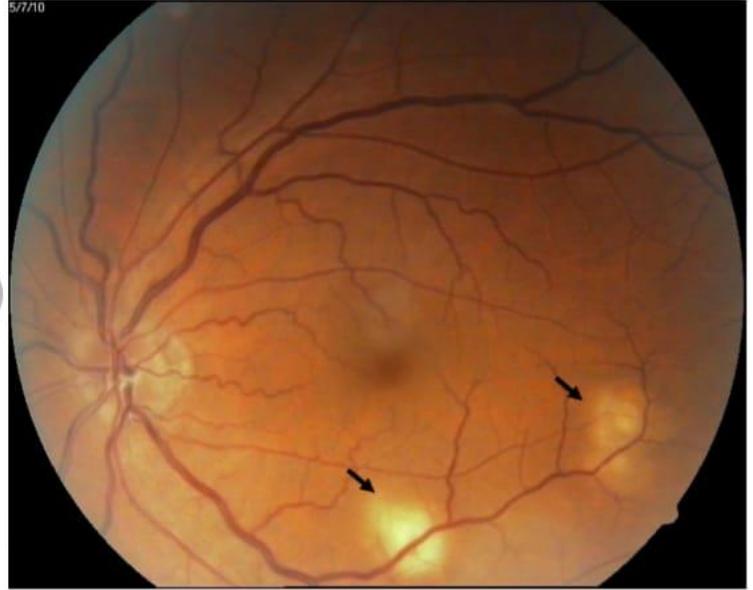
اللى شرحناها قبل كده ومش اى risk factors ،، تحديدا ال

Immunosuppressed patients

Bedside test that is highly suggestive for miliary disseminated TB is

Fundus exam searching for

(Choroid Tubercles)



Ophthalmoscopic picture showing choroid tubercles (arrows). (For interpretation of the

بعد كده بييجى دور ال **Imaging & lab**

Imaging features

الاشعه هيا غالبا الحاجه المميزه جدا اللى بتفرق ال Pulmonary TB العادى من ال miliary المنتشر

CXR:: Diffuse micronodular interstitial shadow



CT chest:

Diffuse innumerable tiny nodules all over the lung fields' ± septal thickening

ملحوظه 1: قد تبدو ال radiographic features واضحة جدااا فى بعض اشعات المرضى وقد تبدو احيانا بسيطه وغير حاسمه وتحتاج لخبيره من دكتور الاشعه ودكتور الصدر /الباطنه /الامراض المعديه .

ملحوظه 2:

The miliary TB (particularly the Acute type) often cause marked pulmonary function compromise with resulting " HYPOXIA" and Type 1 Respiratory failure " , which may transform into ARDS , the patient may die from such deterioration

So please, you must do

Bedside O2 saturation checking by Pulse Oximeter ± ABG

LABS

التحاليل هيا غالبا نفس التحاليل المستخدمه فى تشخيص ال pulmonary TB وغالبا لا تفرق بين النوعين ولكنها تساعد فى تشخيص ال TB نفسه

#Sputum test (3 samples for Z N stain + culture)

If no sputum --> do bronchoaveolar lavage for bronchial washings

#Tuberculin test (may be negative in some cases

#IGRA test (Quantiferon test)

#lumbar puncture and CSF exam for TB by

ZN stain, culture, High protein, cells [Lymphocytes]

Additional basic labs

CBC: search for

Normocytic Normochromic anemia

-Lymphocytic leucocytosis Or Pancytopenia

LFTs: elevated liver enzymes, bilirubin

Alkaline phosphatase



Additional imaging

U/s scan searching for

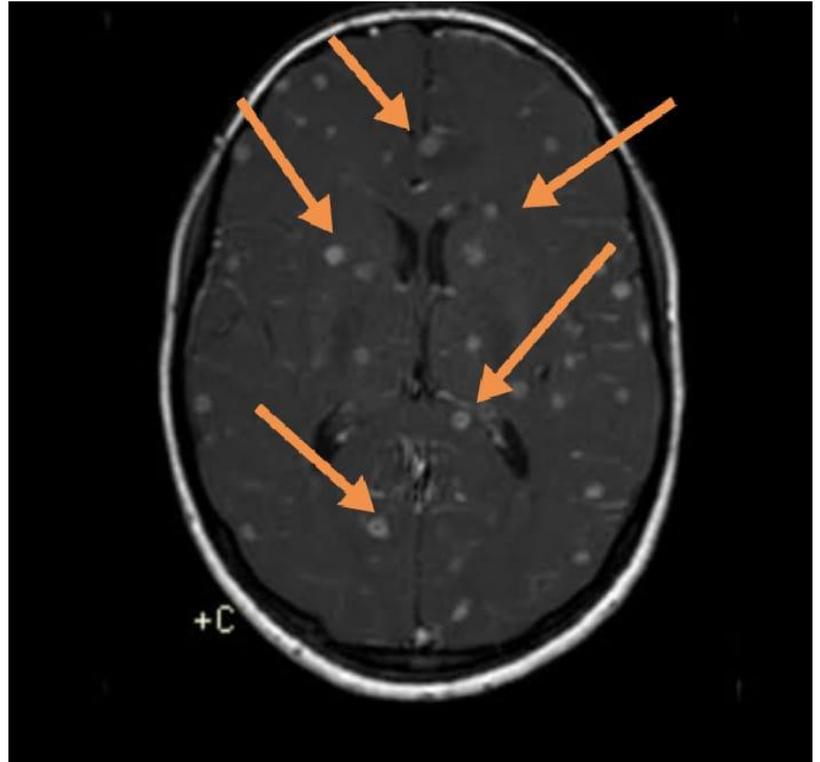
Fluid accumulation in the peritoneum +
hepatosplenomegaly

#Ascitic fluid analysis

For high protein, Lymphocytes, ZN stain &
culture for TB

MRI brain: thickened enhanced meninges
common (Tuberculomas) ring like enhanced
nodules scattered in the brain may occur, they
are similar to Neurocysticercosis { rare }

Urine analysis: sterile Pyuria

**Treatment:**

Same anti-TB regimens (discussed before)

If CNS/Meningeal involvement

Add oral steroids

Duration of Anti- TB therapy --> 9 - 12 months

Hypoxia: Oxygen therapy

ARDS --> mechanical ventilation