

Opportunistic infections

Definition

- An infection by a microorganism that normally does not cause disease but does so when lowered resistance to infection is caused by the impairment of the body's immune system.

Typical opportunistic infections

- Oral thrush
- PPE
- Zoster
- Tuberculosis
- TB Lymphadenitis
- TB meningitis
- Cryptococcal Meningitis
- Toxoplasmosis
- Pneumonia
- Pneumocystis carinii pneumonia
- Diarrhea eg caused by isospora, by HIV itself

Thrush = Candida



Oral thrush involving hard and soft palate

- Loss of taste
- Numb feeling of tongue
- Oesophageal candidiasis can cause painful swallowing.
- Treatment: Nystatin / Fluconazole (for oesophageal candida)

PPE



« Itchy-Bumpy Disease »
(HIV-associated eosinophilic folliculitis)

Zoster = Shingles



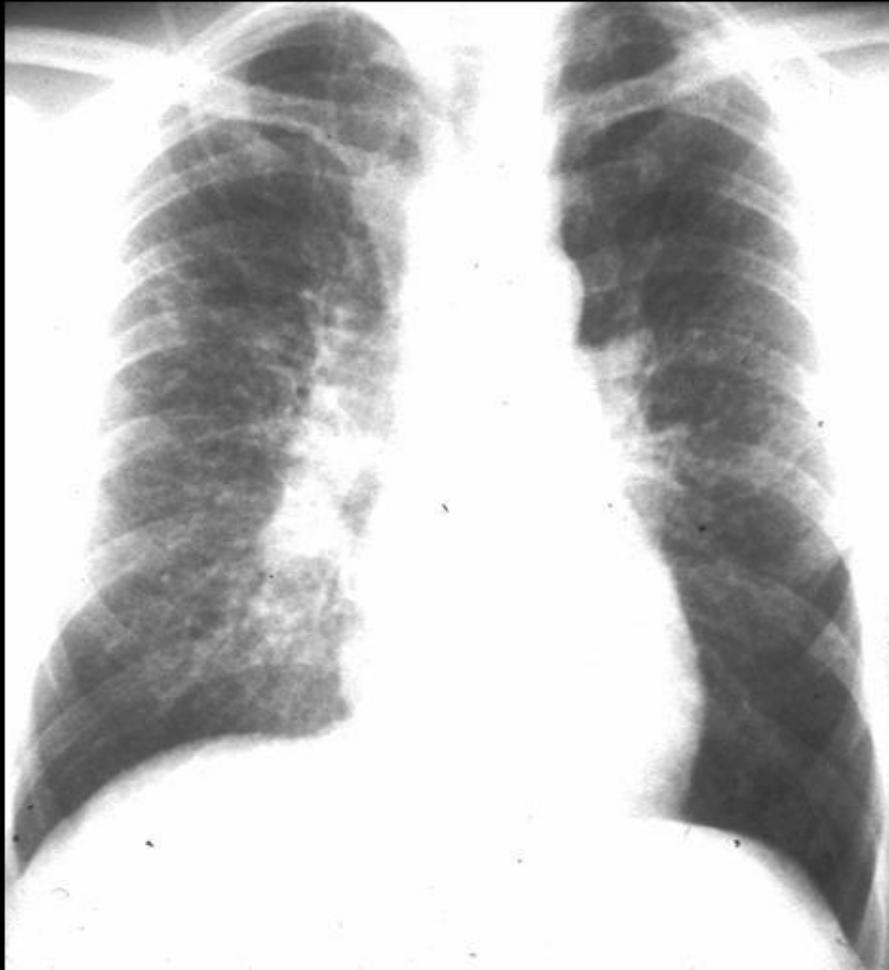
Early lesions of *herpes zoster*, involving the first branch of the trigeminal nerve (V_1).

- Often very painful
- If eye is involved patient can go blind
- Often leaves scars
- Can cause pain long after the blisters have disappeared
- Treatment: Acyclovir
- If pain persists: Amitriptyline

Tuberculosis in general

- Cough – not always
- Night sweat
- Weight loss
- Feeling weak
- Loss of appetite

Pulmonary TB = TB of the lung



Case HIV-TB 5,
Slide # 1:

Immune-suppressed
patient with 49 CD4
cells, weight loss,
fever, and cough.

Note:

- *Widening of hili*
- *Reticulonodular infiltrate*

Treatment for TB

INH

Rifampicin

Pyrazinamide (PZA)

Ethambutol

Streptomycin



Recommended TB treatment regimens

Treatment regimens have an
intensive phase and continuation phase

Intensive phase

2HRZE

/

Continuation phase

4HR



Monitoring of TB patients during treatment

Clinical monitoring

Sputum AFB in AFB+ pulmonary TB patient

Routine chest x-ray is un-necessary

TB Lymphadenitis



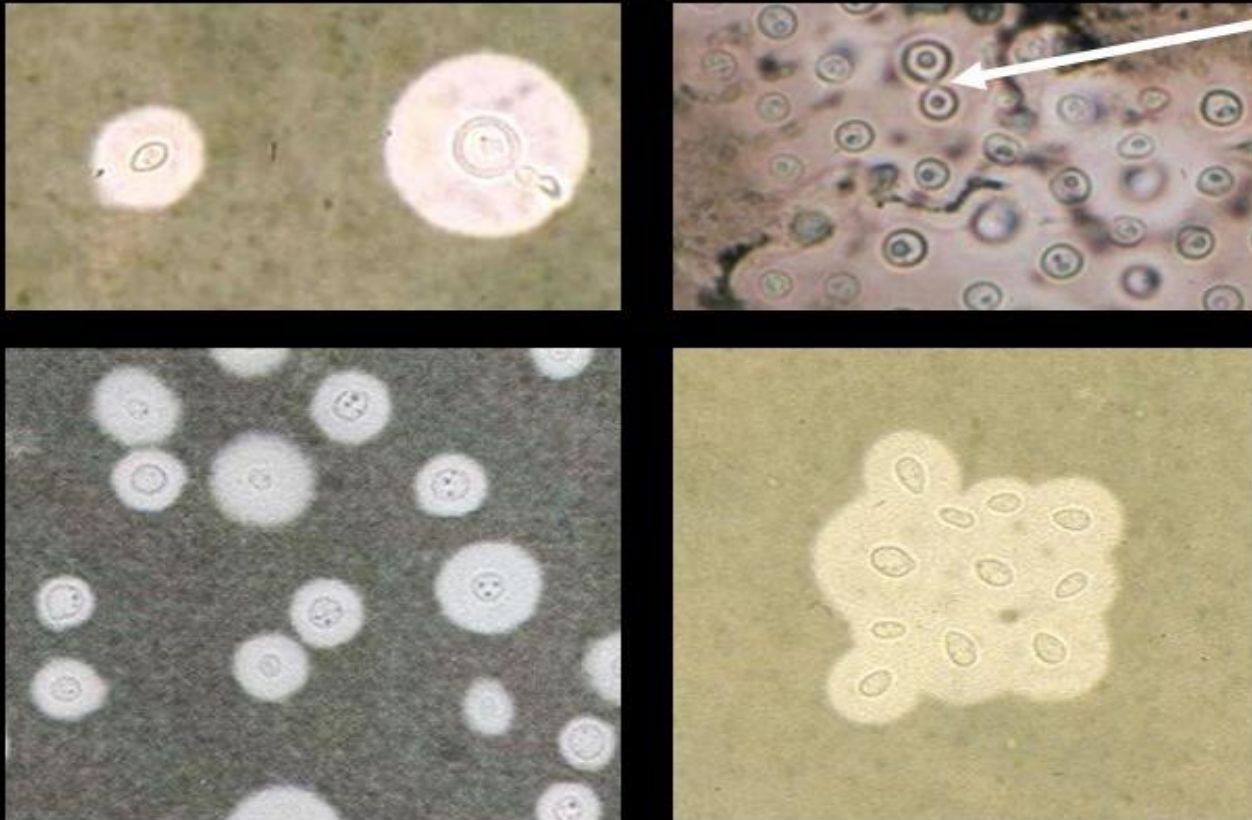
HIV/TB coinfection with
cervical lymphadenopathy

TB meningitis / Cryptococcal meningitis

- Fever, weight loss
- Maybe cough
- HEADACHE!
- Vomiting
- Stiff neck

- Treatment:
 - TB pills for TB meningitis
 - Fluconazole for Cryptococcus

Cryptococcus under the microscope



In the cerebrospinal fluid, after staining with « india ink » (in reality, now a synthetic stain), *C. neoformans*' large capsule is clearly visible. Budding forms are typical (arrow)

Pneumonia

- Cough and fever
- Usually sudden onset

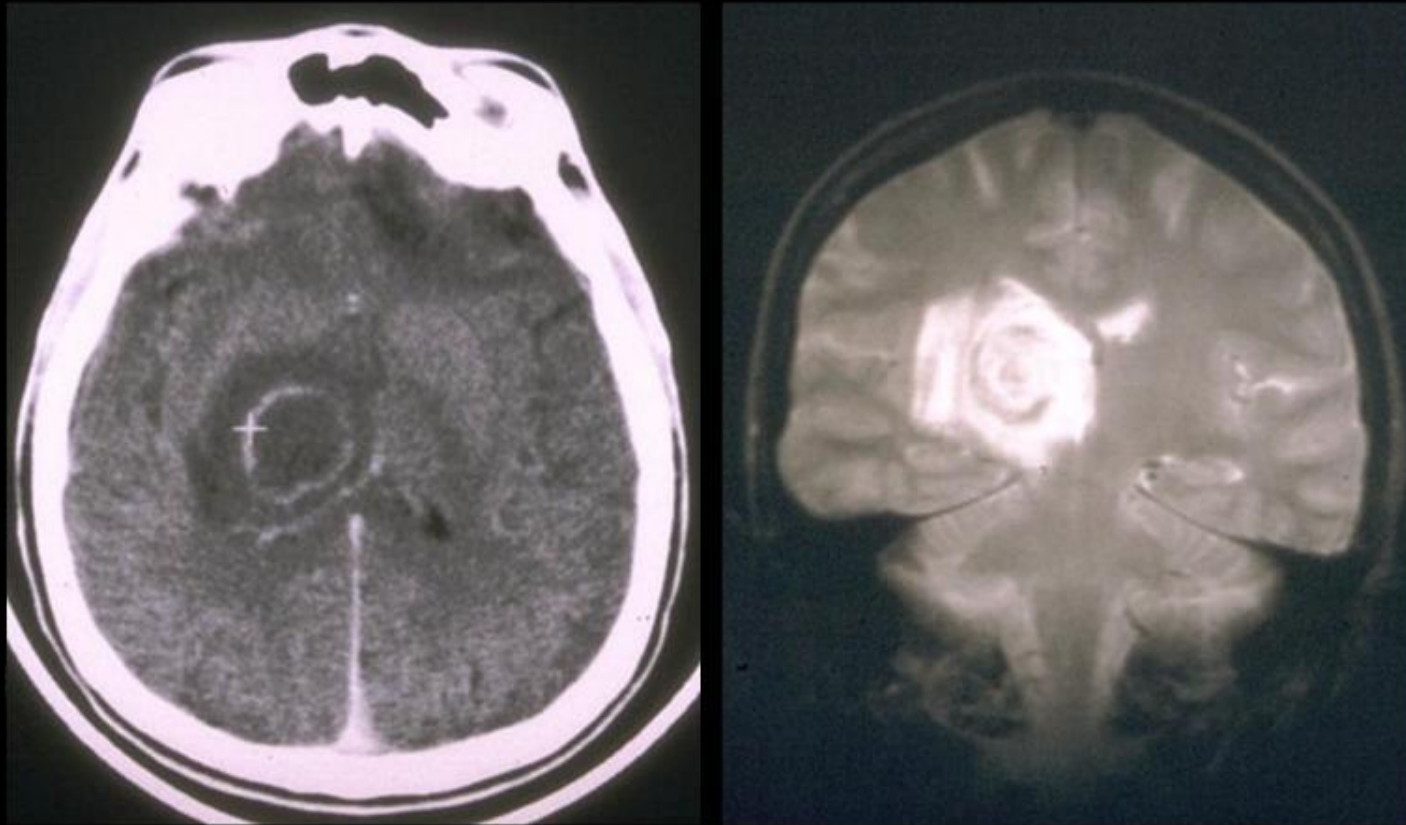
Treatment with antibiotics

Toxoplasmosis

- Fever
- Headache
- Seizures
- Paresis eg of one arm or leg

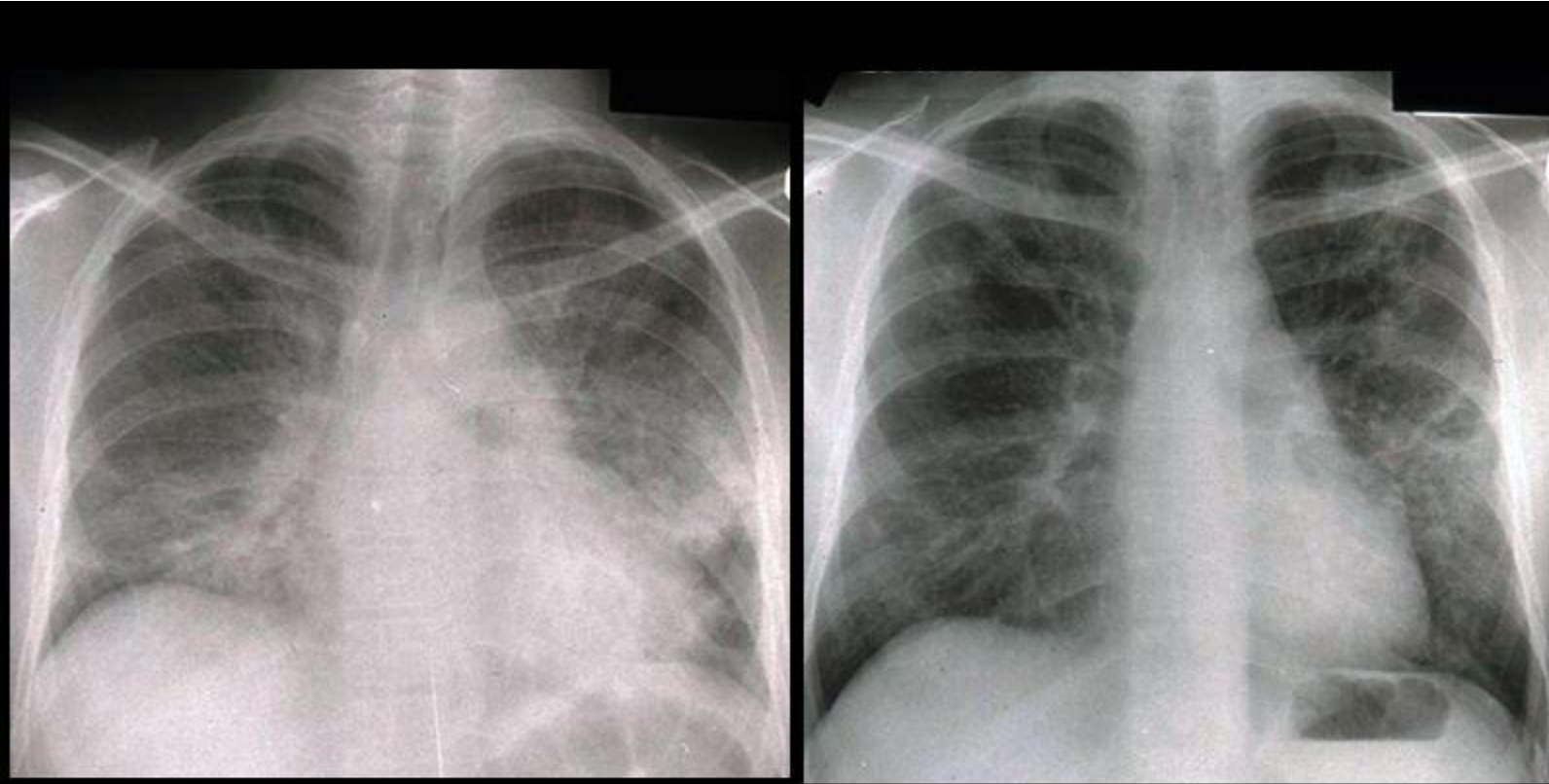
Toxoplasmosis

Toxo case 10, slide # 2



A comparison of the same lesion as seen in contrast-enhanced CT, and in the NMR scan after gadolinium injection.

PCP



November 14

Nov 28, post-treatment

PCP, case 3, slide 1:

On the left, note bronchograms. On the right, note improvement after 2 weeks of high-dose co-trimoxazole

PCP

- Sort of pneumonia
- Often chronic dry cough
- Shortness of breath
- Weight loss
- Weakness

Diarrhea



- Treatment: loperamide, antibiotics, sometimes high dose bactrim

Not typical opportunistic infections but symptoms may be worse in HIV positive people

- HSV 2 (Herpes genitalis)
- Genital warts

Herpes genitalis

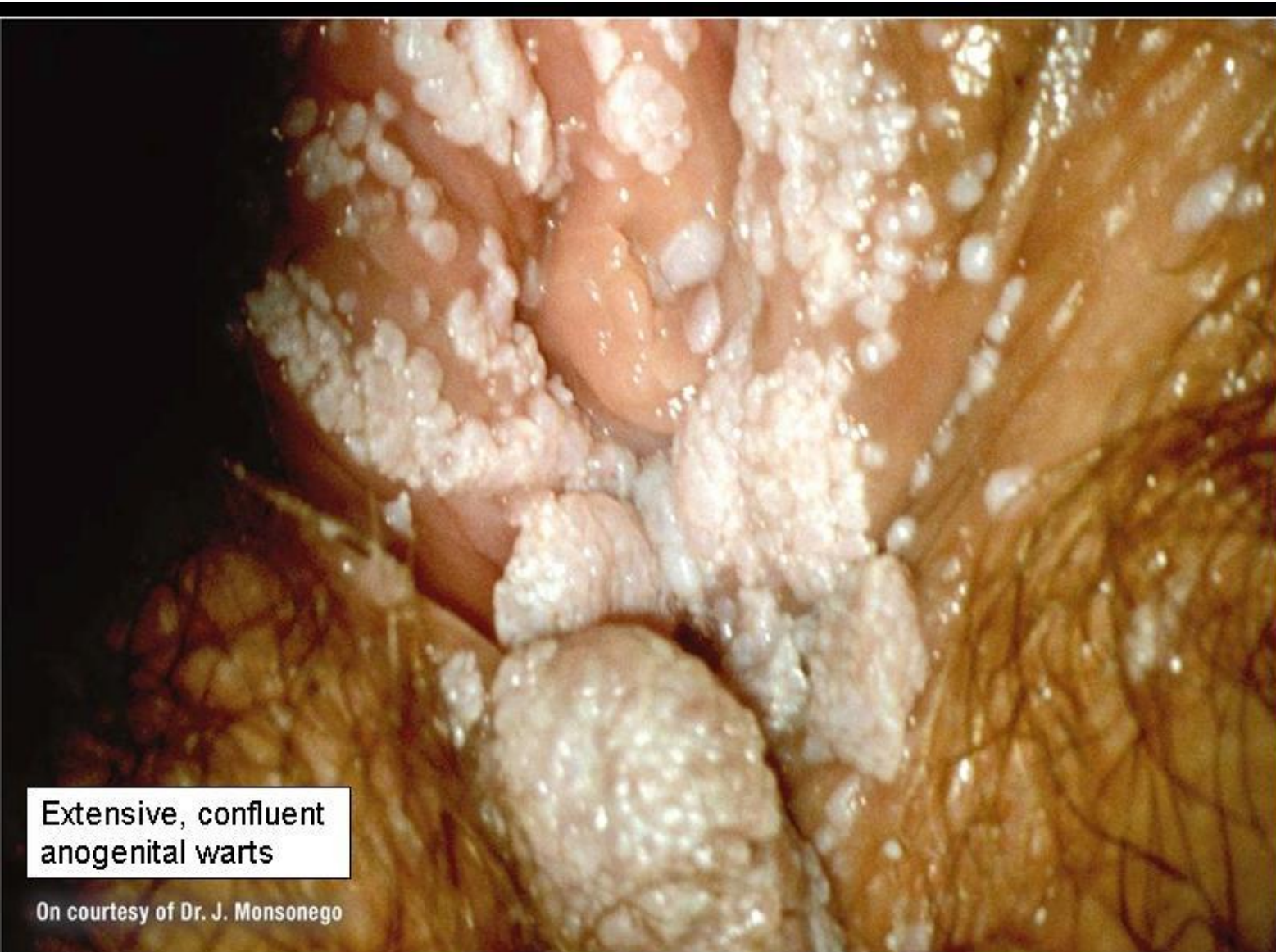


Chronic herpes simplex, resistant
to aciclovir



After treatment with foscarnet

Genital warts



Extensive, confluent
anogenital warts

On courtesy of Dr. J. Monsonego

Cancers which are more common or typical in HIV positive people:

- Kaposi Sarcoma
- Cervical cancer

Kaposi Sarkoma



Kaposi

- Dark lesions/ spots on the skin
- Sometimes also in the lung and in the mouth/
gut
- Treatment: Chemotherapy / ARV's

Illnesses which can be caused by HIV itself

- HIV related polyneuropathy (burning feet)
- HIV related weight loss
- HIV related swollen lymph nodes
- HIV related Diarrhea
- HIV related Mouth ulcers
- HIV related Dementia (Apathia, forgetfulness, confusion, not interested in things, slow moving)