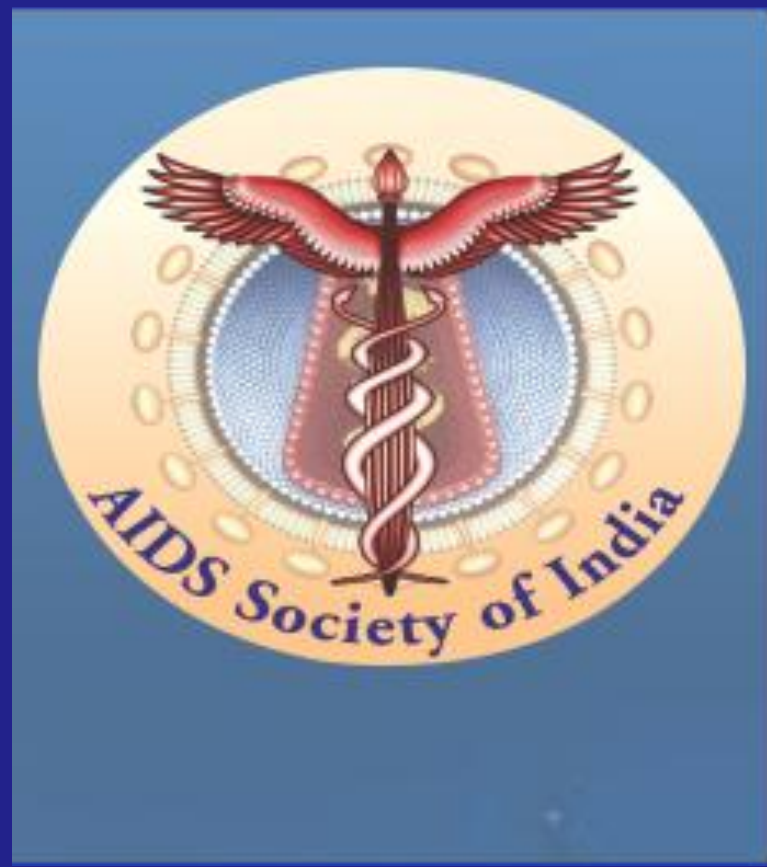




# Multiple Opportunistic Infections in HIV



**Authors: Agnibho Mondal, Avik Medda and Rama Prosad Goswami**  
Department of Tropical Medicine, School of Tropical Medicine, Kolkata, India

## Introduction

Infection with HIV results in progressive depletion of the CD4 T-lymphocytes and the development of multiple opportunistic infections (OI) which is a serious cause of concern regarding outcome.

Anti-Retroviral Therapy (ART) has a profound effect on the incidence of HIV related OIs and is the key factor for the decline in observed HIV related mortality across the globe.

World Health Organization (WHO) recommends initiation of ART among all HIV infected persons regardless of WHO clinical stage and CD4 cell count.

But a significant number of ART naïve HIV infected persons continue to present with advanced disease.

## Presentation

A 29 year old female patient presented with progressive right sided hemiparesis for past 2 weeks and drowsiness for past 10 days.

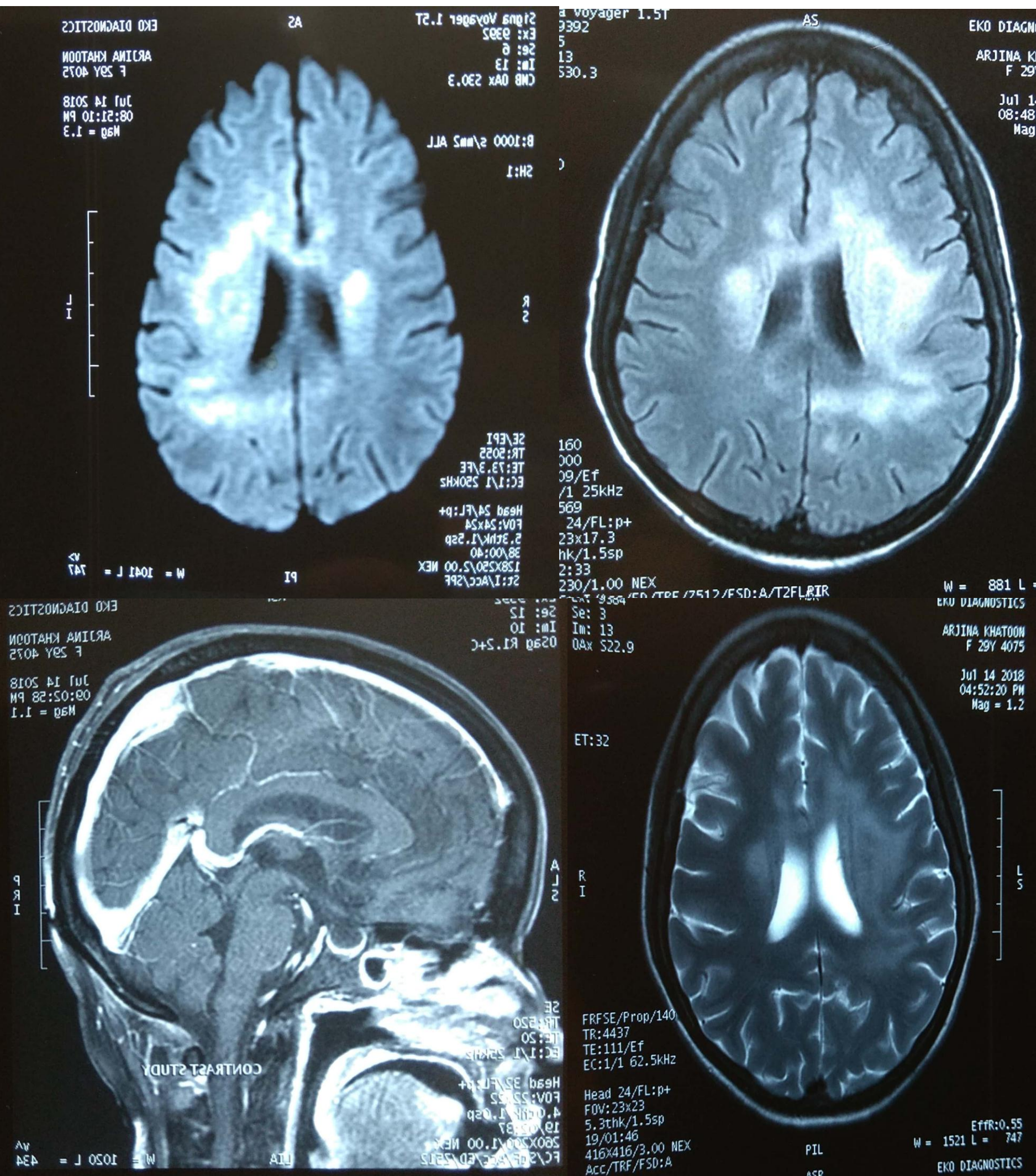
She had incontinence of bladder. She was also having bloody diarrhoea for more than one month.

She had recently been diagnosed as HIV-1 positive and was ART naïve.

She had a past history of extra-pulmonary tuberculosis for which she received category-I anti-tubercular therapy.

Ophthalmological examination done which showed no features of CMV chorio-retinitis.

## MRI Brain



## Examination

Patient disoriented and drowsy.

GCS- 8/15 (E2V2M4)

Mild pallor - present.

BP- 100/70

Pulse rate- 70/ minute, regular

Respiratory rate- 24 / minute.

Examination of peri anal region revealed vesicular eruptions with satellite ulcerations and discharge indicating genital herpes.

Oral candidiasis present.

Neck rigidity- present, Kernig's sign- Positive

Plantar reflex - Bilateral flexor

Pupils- Bilateral mid dilated and reacting to light.

Muscle tone- increased on right side compared to left.

Power - diminished (3/5) on the right side in both upper and lower limbs.

Deep tendon reflexes- Brisk on right side

## Investigations

### Complete Hemogram

Hemoglobin	8.6 gm/dl
MCV	86.4 fl
MCH	29.3 pg
MCHC	33.9 gm/ dl
TLC	2900 / $\mu$ L
Platelet count	153000 / $\mu$ L

### CSF Study

Pressure	High
Cytology	327 / hpf, all lymphocytes
Protein	80.9 mg/dl
Glucose	48 mg/dl
ADA	80.71 U/L
CBNAAT	Not detected

### ELISA for HIV I & II

HIV-I	+ve
CD4 T lymphocyte count ( Absolute)	3 / $\mu$ L

### Serum Toxoplasma IgG (ELISA)

4+ in 1:64 dilution (286.51 U/ml)	
Serum CRAG ( Latex agglutination)	4+ in 1:32 dilution

### MRI Brain

Periventricular hyperintensities, focal demyelination with diffuse edema suggestive of encephalopathy.

## Conclusion

Occurrence of multiple AIDS defining OIs in single HIV-infected individual in this report highlights the need for early screening and treatment to improve outcome.

Early diagnosis and ART initiation has a significant role in reducing HIV related mortality.

In case of HIV infected persons receiving ART, a significant reduction in the incidence of OIs has been observed during the first year ranging from 57% to 91%. [2]

Every immune-compromised patients with low CD4 count should be searched for multiple OI and be given appropriate prophylaxis.

## Acknowledgement

- Director, School of Tropical Medicine, Kolkata, who has given us the privilege to report this case
- The patient, who has given us the scope to learn the topic

## References

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2. Andrea Low, Georgios Gavriilidis, Natasha Larke, Marie-Renee B-Lazoie, Olivier Drouin, JohnStover et al. Incidence of Opportunistic Infections and the Impact of Antiretroviral Therapy Among HIV-Infected Adults in Low and Middle Income Countries: A systemic Review and Meta-analysis. CID 2016: 62 ; 1595-1603

## Management

She was started on –

1. Conventional Amphotericin B ( 1 mg/ Kg) daily for Cryptococcal meningitis
2. Tab Sulphamethoxazole-trimethoprim DS- 2 tabs twice daily for CNS toxoplasmosis
3. Tab Acyclovir (400 mg) thrice daily for genital herpes
4. Tab Ciprofloxacin (750 mg) twice daily for diarrhoea
5. Intravenous Dexamethasone (4 mg) twice daily for TBM
6. Empirical category II anti-tubercular drugs ( Daily regime) for TBM

## Outcome

She showed initial improvement with the therapy. Her GCS improved to 10/15 (E4V2M4). The bloody diarrhea was relieved.

But by the third week of admission her condition rapidly deteriorated and she expired.

## Diagnosis

Immunocompromised patient with-

1. Tubercular meningitis
2. CNS toxoplasmosis
3. Cryptococcal meningitis
4. Genital herpes
5. Diarrhoea