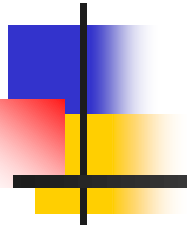


MAC arthritis in HIV infected patient



Dr. Vipul V. Shah MD

Consultant : Infectious diseases

Ahmedabad, India



Case history

- 27 years old remarried female
- History of recurrent diarrhea, abdominal pain, weight loss, anorexia, weakness
- Oral thrush two month back
- Tonsillectomy in childhood

Evaluated at GI clinic

- UGI Endoscopy – normal

- Colonoscopy – normal

Patient Name: SEJAL P, PATEL

Contact #: KH1206219

Patient ID: KH1206219

Referred Dr:

Procedure: UGI

Age/Gender: 27Yrs, Female

Visit Date: 22/06/2012

Consulted Dr: DR MANAS DESAI MRCP,CCST

Medication:

Indication : Bloating, diarrhoea

GE JUNCTION

Esophagus : Normal

Z line : 36cm

GOJ : 36cm

Stomach : Normal

Fundus : Normal

Body : Normal

Antrum : Normal

Pylorus : Normal

Duodenum : Normal

D1 : Normal

D2 : Normal

Impression : Normal Study

Procedure : Gastric bx for H. Pylori and Duode

Visit Notes : Normal Study

Patient Name: SEJAL P, PATEL

Contact #:

Patient ID: KH1206219

Referred Dr:

Procedure: COLONOSCOPY

Premedication : Normal

P/R : Nil

Preparation : Satisfactory

Proctoscopy : Nil

Anal Canal : Normal

Rectum : Normal

Recto Sigmoid : Normal

Sigmoid Colon : Normal

Descending Colon : Normal

Splenic Flexure : Normal

Transverse Colon : Normal

Hepatic Colon : Normal

Ascending Colon : Normal

IC Valve : Normal

Cecum : Normal

Terminal Ileum : Normal

Impression : Normal to deep Terminal ileum

Procedure :

Visit Notes : Normal

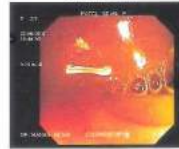
Age/Gender: 27Yrs, Female

Visit Date: 22/06/2012

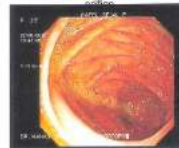
Consulted Dr: DR MANAS DESAI MRCP,CCST

Medication:

Terminal Ileum



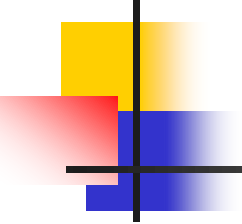
Caecal pole with appendicular





Investigations at GI clinic

- Hb: 10.2 gm%
- TC : 3200/cmm
- DC: P58, L31, M6,E3
- Platelet : 300000/cmm
- ESR : 48/1hr
- RBS : 106.3
- Urine : Normal
- SGPT : 84.2

- 
-
- HBV, HCV serology: Negative
 - Western Blot: HIV 1
 - USG abdomen :
 - Mild hepatosplenomgaly
 - X-ray chest PA : Normal





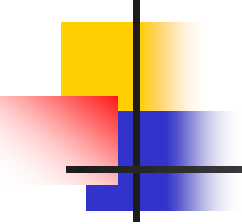
On examination

- Vital data : normal
- Pallor +
- Tongue pigmentation +
- Systemic examination normal



At our clinic

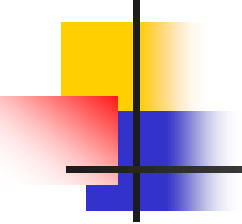
- CD4: 97 (12%), CD8: 398 (49%),
Ratio: 0.24
- Stool examination including modified ZN
stain : Normal
- SGOT, SAP : Normal

- 
-
- Put on TDF/FTC/EFV on 27/06/2012
 - TMP/SMX for prophylaxis
 - History of sprain of left foot 19/07/2012 (After 3 weeks of HAART)
 - Gradually increasing swelling, redness and pain
 - Consulted orthopedic surgeon
 - Advised elastocrap bandage and NSAID and ABx



Further course

- Situation worsened
- Admitted – 08/08/2012
- USG suggestive of abscess formation
 - Swelling situated at medial aspect of left ankle
 - Subcut odema
 - Soft tissue thickening and irregularity at the site of swelling
 - Underlying tendon shows minimal surrounding fluid

- 
-
- Aspiration of pus done and send for primary stain and pyogenic and TB culture
 - ZN stain : AFB ++
 - Put on ATT (HERZ)
 - Later performed I and D



AP

LAT

S [REDACTED] I P [REDACTED] ANKLE AP LAT/O
SIDDHIVINAYAK HOSPITAL, AHME





MRI

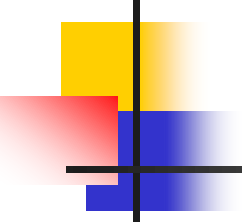
- Navicular bone with cortical disruption
- Multi-loculated collections in foot
- Talonavicular joint and anterior part of sinus tarsi

Sc 8.1/12
TSE / SE/M [20]

11.0 cm

A
F
R
E



- 
-
- On 20/08/2012 – TB culture positive
 - NTM
 - NTM speciation by LPA
 - M. Intracellulare
 - Patient shifted to Rifabutin (300 mg)/Ethambutol (800 mg)/azithromycin (500mg) combination



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MICROBIOLOGY REPORT

Permanent ID:N/A

Patient Name:S [REDACTED] P [REDACTED]

Age:27y

Ref.by :Dr.VIPUL.V.SHAH

Sex:F

Case ID:0352

Case Date:08/08/2012

Billing Location:SIDDHI VINAYAK DIAG MANINAGAR
9723642228

Sample Collection/Received:08/08/2012
21:09

Sample Type:NORMAL

Report Release:11/08/2012 12:36

CULTURE AND SENSITIVITY FOR BACTERIA

TEST	RESULTS UNIT	EXPECTED VALUES	REMARK
SPECIMEN			
SPECIMEN	PUS (ANKLE)		
KOH PREPARATION			
KOH PREPARATION :	NO FUNGAL ELEMENTS ARE SEEN		
Z.N STAIN BY PETROFF METHOD			
Z.N. STAIN	A.F.B. DETECTED.(++)		
GRAM STAIN			
GRAM - STAIN :	NO MICROORGANISMS ARE SEEN,MANY PUS CELLS		
CULTURE METHODS AND EXAMINATION			
CULTURE METHODS & EXAMINATION	NEGATIVE NO GROWTH OF ANY MICROORGANISMS IS SEEN UPTO 48 HOURS OF INCUBATION.(SPECIME WAS CULTURED ON NUTRIENT AGAR MAC-CONKEYAS AGAR & BLOOD AGAR MEDIUM)		
ORGANISM			
ORGANISM :	NOT APPLICABLE		
COLONY COUNT			
COLONY COUNT :	NOT APPLICABLE		
NOTE			
NOTE :	SENSITIVITY REPORTING HAS NOT BEEN DONE AS THERE WAS NO GROWTH OF ANY BACTERIA		

*Note: (LL - Very low, L- Low, H- High, HH-Very High)



MICROBIOLOGY REPORT

Patient's name: S [redacted] Pa [redacted]

Age: 27 Years

Case Id: 2094

Sex: Female

Dr' Name : Dr Vipul V Shah MD

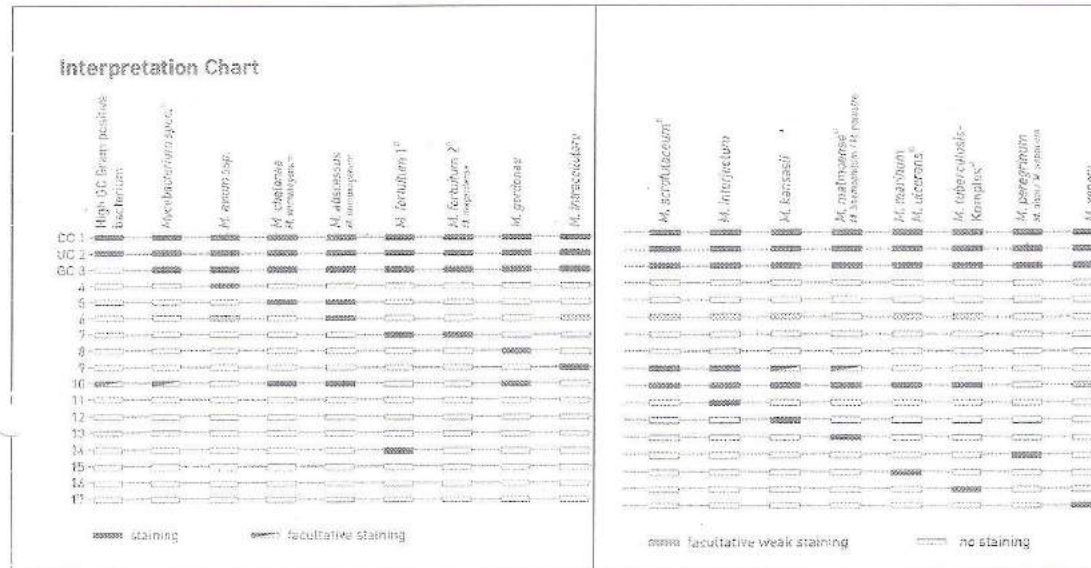
Date: 20/08/2012

Location: Supratech

Specimen: **Mycobacterial growth from Pus (Ankle)**

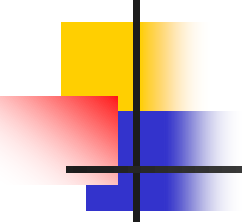
Speciation of NTM by Line Probe Assay

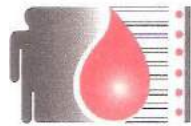
Method : The technology is based on reverse-phase hybridization (Line probe assay) aimed at revealing an amplification product of a proprietary fragment (Mycobacteria sp.) of approximately 230 bp within the 23S rRNA gene.



Result :

Interpretation : The test indicates presence of **Mycobacterium intracellulare**

- 
-
- Patient clinically improved
 - Discharge gradually decreased, pain subsided
 - Sinus tract removal required on 30/10/2012
 - Biopsy suggestive of granulomatous inflammation s/o tuberculosis
 - TB culture negative
 - CD4 (25/12/12) : 363 (21)623(36).58
 - PVL (25/12/12) : Less than detectable



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Centre for Histopathology, Cytology, Immunohistochemistry, Immunofluorescence & Frozen Section

Permanent ID:N/A

HISTOPATHOLOGY & CYTOLOGY REPORT

Patient Name:SE [REDACTED] P [REDACTED]

Age:27y

Ref.by :Dr.APURVA ACHARYA

Sex:F

Case ID:2542

Case Date:30/10/2012

Billing Location:Supratech

Sample Collection/Received:30/10/2012 17:28

Sample Type:NORMAL

Report Release:02/11/2012 18:14

BIOPSY REPORT

TEST	RESULTS UNIT	EXPECTED VALUES	REMARK
NATURE OF MATERIAL			
NATURE OF MATERIAL :	Sinus debridement for histopathological examination.		
	Clinical details: Nil.		
GROSS EXAMINATION			
GROSS EXAMINATION :	Received multiple pinkish soft tissue of fragments measuring in aggregates of 2x2cm. Partially embedded.(Two blocks)		
MICROSCOPIC EXAMINATION			
MICROSCOPIC EXAMINATION :	The sections reveal fibrocollagenous tissue infiltrated by lymphoplasmacytic cells and histiocytes along with presence of granulomas composed of epithelioid cells, lymphocytes, Langhan`s and foreign body type of giant cells.Areas of necrosis are present.Granulation with few ill-defined granulomas are present.Ziehl Neelson`s stain is negative for acid fast bacilli		
DIAGNOSIS			
DIAGNOSIS :	Granulomatous inflammation suggestive of tuberculosis.		
	Corelation with AFB culture is suggested.		



Last follow up : 01/02/14

CD4 : 496 (25), 421 (27), .94



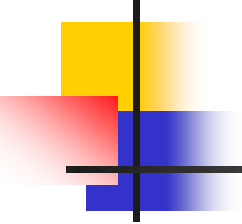
Learning points

- TB IRIS is common
- High degree of suspicion is required particularly situation like hot abscess
- Always send sample for TB culture as you can not differentiate M. TB from MOTT (NTM) from smear
- Speciation of NTM is required as treatment is different
- ??Smear AFB positive + Xpert negative = NTM



Discussion

- MAC bacteria are ubiquitous
- Can be found in diverse animal species, on land, in water and food
- Isolation of infected patient is not necessary
- May be detectable in sputum or in stool as colonizer in asymptomatic patient
- Usually occurs when CD4 is $<100/\text{cmm}$

- 
-
- Not common in India
 - In pre ART era usually occurred in chronic disseminated form
 - In ART era usually occurred as localized form and as IRIS



Signs and symptoms

- Disseminated

- Non-specific
- Fever, weightloss, diarrhea, abdominal pain

- Localized

- Lymphnode abscess – any site
- Abscess of skin and soft tissue
- Osteomyelitis esp. vertebrae
- Septic arthritis (observed: Knee, hand and fingers)



Abnormality

- Anemia
- Pancytopenia
- Elevated alkaline phosphatase
- Hepatosplenomegaly
- Lymphadenopathy



Diagnostic test

- Cultures and speciation
- Blood culture (heparinized blood) in disseminated form
- Bonemarrow culture in anemia, pancytopenia
- Tissue or pus in localized form
- If positive in sputum, BAL or in stool : consider as pathogen cautiously



Treatment

- Triple drug combination*
- Clarithromycin + ethambutol + rifabutin
- You can use azithromycin in place of clarithromycin
- Reserve drugs: Amikacin, quinolones, clofazimine
- Duration is 6 months or till CD4 > 100/cmm**
- Prophylaxis
 - If CD4 is <50/cmm: Azithromycin 1200 mg/week



Treatment response monitoring

- In disseminated form : Blood cultures
 - Atleast after 8 weeks
- In localized form : better judged clinically