Case Studies: Programme Management & Treatment with MDT

Case 1:

Rahman, 35 years old male, on his visit to health center for treatment of his son, was diagnosed to be suffering from leprosy and was registered for treatment. While checking the treatment register at the end of the month, you noticed that he has not come to collect the medicine for the fourth month.

Discussion points:
- What are possible reasons for this?
- What action will you take to prevent such incidences in future?
- What modification will have to be made to his treatment?
- Discuss management of irregular treatment and defaulter

Case Studies: Epidemiology

Case 2:

Sushma, a multipurpose health worker of a sub-centre in your area informs you that an old woman, on treatment for leprosy, has been abandoned by the family members, and she (Health worker), is unable to convince the family members to keep her in the house.

Discussion points:
- What are the possible reasons?
- How would you solve the problem?
- How such incidences can be prevented in future?

Case Studies: Epidemiology

Case 3

Lacchu, 42 years old male, came to health center for treatment of skin lesions. He told the doctor that around two years back he had noticed a light coloured (hypo-pigmented) patch on his thigh but, as it caused no problem he did not seek any treatment. Recently, he developed, two more similar patches and got worried. He has been diagnosed as suffering from leprosy and has been registered for treatment.

Discussion points:
- What do you interpret from this?
- How can similar situations be avoided in future? Or
- What specific measures can be taken by you?
Case Studies: Epidemiology

Case 4

Asim, 13 years old boy, has been brought to health center with a wound on the palm of right hand. The wound is painless and claw deformity of the little finger of the right hand was noticed on examination. On eliciting a detailed history it was learnt that the deformity of the little finger developed around six months back and he has been taking treatment for it from a local traditional healer.

- What does this indicate?
- What intervention do you need to take to control the transmission of the disease in the area?
- What other steps will you take to reduce the likelihood of something similar occurring in the area?

Case study: Pathogenesis/ reactions

Case 5:

Mr. Suresh, a 47 years old male, diagnosed as MB leprosy, was put under MDT immediately. He developed lepra reaction, after 3-4 months of starting MDT, and anti reaction treatment was started with Prednisolone, 40 mg daily. When reviewed before releasing from treatment, lesions were found to be clinically active. He was examined for Bacterial Index (BI) & Morphological Index (MI), which was reported as BI = 3+ & MI = 12%.

Medial Officer advised him to continue MDT for another 12 months. After completion of 18 months of MDT (total), he was re-examined again for BI & MI, which showed BI = 2+; MI =5%. Before the completion of 24 BCP, BI & MI, was reported to be BI = 1+ & MI = 2%.

The patient was referred to the state medical Board, Manipur, and Government of Manipur referred him to SLTRI Karigiri (a specialized centre for leprosy). He was admitted and BI & MI were found to be BI = 0.5+ & MI = 2% respectively.

He was advised to stop MDT after 24 BCPs and put on Prednisolone 20 mg for one month which was reduced by 2.5 mg every month along with tablet Chloroquine and capsule Clofazimine (other drugs used for reaction,) by the specialist and was advised to report for follow up at SLTRI, Karigiri after 3 months. After 3 months BI & MI were found to be same i.e. BI = 0.5+ & MI = 2%. The patient is still having lepra reaction

Discussion points:

B.I./M.I

- How is BI & MI done/read/reported?
- Where are the facilities available for BI & MI– nearest?
- Can it be done in more places where AFB microscopy is available?
- What is the MI report of an untreated newly diagnosed MB patient?
- How does B.I. & MI change with treatment?
- What changes earlier, and why?
Clinical aspects:
- Was M.O. correct to extend therapy? Why? What else could be done?
- What is the normal expected rate of change of BI after adequate treatment? Why?
- Who are the patients with high risk of reactivation/relapse?
- What type of reaction is more common in MB patients? Why?
- If the patient was managed by chloroquine and clofazimine, along with steroids, at Karigiri, what type of reaction do you think patient was having?
- What alternative management may have helped the patient?

Case Study: Diagnosis

Case 6:

13 yrs old female child was brought to health centre. Medical officer PHC found hypo pigmented patch on right hand with partial loss of sensation on skin lesion, no nerve could be palpated and no impairment of nerve function could be found on examination of the nerves. Medical Officers did not prescribe any MDT drug and advised that the child should be followed at frequent intervals

Discussion points:
- What type of leprosy do you think the child is suffering from? Why?
- How does this form of leprosy evolve?
- How should it be managed?
- How frequently should they be reviewed?
- What advise/counseling should patient/family receive?
- If patient cannot come as frequently for review as desired what can be done?
- What is the outcome that needs to be avoided?
- Would it be better to start MDT in such cases?
- Can MDT prevent evolution of disease?
- Can MDT prevent/reduce permanent nerve damage?

Case Study: Pathogenesis / Diagnosis

Case 7:

Manoj Kumar, an 18 years old motor mechanic, reported to the medical officer with complaints of, pain in the right elbow, weakness in right hand and a persisting bend in the little finger, of two months duration.

On examination, the medical officer found thickened & tender right ulnar nerve, sensory impairment on ulnar side of right hand and clawing of right little finger.

Apart from these signs, there were two big hypo pigmented patches with four satellite lesions on right arm.

On asking again, Manoj said that he had first noticed the patches one and half year ago, but did not seek any treatment for them.

Discussion points
- What is the complete diagnosis? Why?
At what stage has the patient come?
How can this be changed?
What is the prognosis for the patient?
What are occupational implications?
What action should medical officer take to avoid delayed reporting?
What counseling should the patient and his family, receive?
What action you must take at the community level?

Case Study: Prevention of Disability (POD)

Case 8:
Mr. Kailash Singh, a 50 years old agriculture labourer, reported slipping of his chappal / foot ware from his right foot, while walking, for the past ten days. His old leprosy record indicates that, two years ago, he had completed MB-MDT for 24 months, for the treatment of multiple patches and was regular in taking the treatment.

Discussion points:
- What could be the cause of the complaint (Slipping of chappals) in leprosy patients?
  - What is the patho-mechanism?
- What do you think has happened in this case? What are the possibilities?
- How will you manage this case?
- What is his prognosis?
- How could this have been prevented?

Case Study: Reaction & POD

Case 9:
Mr. Karupaiyan, aged 38 years, works as a cook in a hotel. He developed nodules all over the body and pain in both his elbows. He took treatment for these complaints from a local General Practitioner, without much improvement. One day, his friend came to visit him and found it surprising when he observed that Karupaiyan could hold many moderately hot vessels without using any insulator/protection. Karupaiyan told his friend that his ability was because of his long practice of holding hot things but his friend did not agree and asked him to consult a doctor. Karupaiyan therefore consulted the Medical Officer of the nearby health centre.

Discussion points:
- What do you think is the diagnosis?
- Why do you think the patient did not benefit from the treatment of the local General Practitioner?
- How will you manage this case?
- What specific counseling will you give this patient?
- What special precautions will you take?
Case study: Treatment of leprosy

Case 10:
Nafeesaa, 32 years old, diagnosed as PB leprosy, was registered for treatment in December, 2007. She took regular treatment for two months and took accompanied MDT for one month in March, and left for her native village. She came back in the month of June, to collect medicines, and disclosed that she has developed three more lesions now, making it a total of six lesions.

Discussion points:
- What are the possible reasons for this development?
- What step(s) will you take to decide/determine the exact/actual cause?
- What step(s) will you take to manage this new development?
- What special precautions may be necessary in the follow up of this case?

Case Study: POD

Case 11:
Rahman, 28 years old, an agriculture worker came to the health center requesting medical officer to prescribe some tonic for him as he is developing weakness. On enquiry, he reveals that he feels weakness in his left hand, and, for the past two days, he has noticed that two fingers of his hand (little and ring finger) have become bent (hyper-extended at metacarpophalangeal joint and flexed at both the inter-phalangeal joint).

Discussion points:
- What is the most probable diagnosis?
- What do you expect to find by clinical examination of Rahman?
- What urgent step(s) is/are required to prevent permanent disability?
- What is the cause & how can such cases be prevented from occurring in the community?

Case Study: Reactions

Case 12:
Devi, a 30 years old woman, noticed a few patches on her leg and arm. She showed it to her husband. He took her to a general practitioner who, after examining the patch, told the patient that it was leprosy. He prescribed Rifampicin 450 mg and Dapsone 100 mg daily for 15 days. Devi complied with the doctor’s advice and took the drugs as prescribed. On the 3rd day of treatment, Devi had high temperature. She noticed that the patches have turned an angry red colour and have swollen. Seeing the lesions worsening, she did not go to the treating doctor again.

Instead, she went to another doctor, who gave her some tablets for fever and sent her back. Though Devi’s fever subsided, a few more patches appeared on her back. The deteriorating condition of her disease put Devi under mental agony.
A new problem erupted between her husband and Devi. He did not want to live with her any more. He was told by his relatives that Devi’s disease could not be cured and, they encouraged him to leave her. Taking this advice, he sent her back to her mother’s home

**Discussion points:**
- Was the diagnosis of the general practitioner correct?
- Why do you think the doctor treated Devi in this manner?
- Is the treatment given by the second doctor correct?
- Why do you think he treated Devi like this?
- How can such occurrences be prevented?
- How could Devi’s mental agony have been prevented?
- Could Devi’s family problem have been prevented?
- What action should be taken now?
- What treatment should Devi receive now?

**Case Study: Reactions**

**Case 13:**
Ram Prasad, 22 years old mechanic came to the health centre with a scarred hypopigmented skin lesion on his forehead. On enquiring it was revealed that he had developed this lesion one year back and took treatment from a nearby doctor who had given him medicine for local application saying that medicine will burn out the diseased tissue and thus cure it but there was no effect and a scar developed over it. Now the lesion has become red and swollen

**Discussion points:**
- What is the correct diagnosis?
- What causes leprosy reactions?
- Why do leprosy reactions occur after treatment?
- How would you confirm the diagnosis?
- How should the case be managed?

**Case Study: Reactions during pregnancy**

**Case 14:**
Harvinder Kaur, 38 years old female with 28 weeks of pregnancy was referred by the local dai to medical officer. She was suffering from temperature and had developed tender nodules under the skin over trunk and both the arms and leg. On examination left eye was found red and painful without any other significant finding. Discuss the case.

**Discussion points:**
- What is the Diagnosis?
- How will you confirm the diagnosis?
- What complication can arise in this case?
- How is her physiological state of pregnancy related with the diagnosis?
- Is this type of presentation typical?
- She is worried about her baby. What will you tell her?
- How should a medical officer manage this case?
Case Study: Reactions

Case 15:
**Kamala, 35 years old female** noticed few nodules on her arms and thought it to be mosquito bite. When similar nodules appeared on the thighs two days later she got worried. She confided in her husband. They decided to consult a skin specialist. They went to a well known dermatologist who had retired from services, long time back. He suggested biopsy. The report was found negative for leprosy. The dermatologist was not happy with the report. He referred Kamala to a former colleague of his who had also retired from service. He took smears form the ear lobes, thighs and arms. It was found to be 5+. He put her on a regimen of daily Rifampicin (600 mg) and Dapsone 100 mg. The condition became worse. She developed new painful lesions all over with high fever and joint pains.

The couple became scared. They went to a dermatologist in a well – known corporate hospital. He stared Clofazimine 300 mg a day and prednisolone 40 mg a day in addition to her previous treatment. There was improvement for sometime. When the prednisolone was reduced to 20 mg new lesions appeared. She had such exacerbation about thrice after that. She was referred to leprosy centre.

The patient was anxious. She had developed cushingoid features. She was febrile. She had reddish-brown pigmentation of the skin. She had painful, tender nodules on the neck, arms, thighs and legs. Nerves appeared to be normal. There was no deformity.

**Discussion points:**
- What lessons do we learn from the history of the patient?
- Why was this unusual types of treatment started?
- Why did the patient’s condition worsen?
- What is the condition that she is suffering now?
- Why is her skin reddish brown?
- How should the patient be managed now?
- Can you name some other drugs that may be useful in her condition that can be given at referral centers?
- How will you counsel her?

Case Studies: Reactions

Case 16:
Santi, 42 years old female came to the health worker and requested her to write some good ointment for healing of a wound. On examination, it was found that she had an ulcer on the hypothenar eminence of left hand. Ulnar nerve was thickened and muscle weakness was obvious in left hand. On exploration it was revealed that such wound appears repeatedly, especially after working on chara (manual grass cutting machine for cattle feed) machine. On examining the hand it was found that her ring finger and little fingers are bent. She has told the worker that it has been like this for four months, since her fall from the steps. HW referred the person to the doctor who found left ulnar nerve thickened and sensory loss on the medial 1/3 of the palm.

**Discussion points**
- What deformity is the patient suffering from?
What clinical assessment can you use to check for nerve function in this patient?  
How will you manage this case?  
What all has contributed to the occurrence of this type of a case?

Case Studies: Reactions

Case 17:  
Suru, 18 years old female, registered for MB leprosy, came to the health centre with complaint of redness & pain in the right eye along with deterioration of vision. On detailed evaluation and history taking, history of appearance of tender nodules on both the arms 15 days back was extracted.

Discussion points:  
- What is your diagnosis?  
- Why does it occur?  
- What other complications can arise in this patient?  
- How will you manage this case?

Case 18:  
Mr. Haribhau Hatkar, 52-years old, had developed tingling sensation in the right leg about 6 months back. He went to a local practitioner, who assured him that it was not serious. He was prescribed some B complex. He became worried when a blister appeared on the underside of his right big toe and went to a reputed medical college hospital on advice of his son’s friend, a soldier. He consulted the neurologist, subjected to various investigations, pronounced normal and prescribed injections of B. complex.

About 6 weeks later he found that his right foot was not holding on to the Chappal and it was slipping out of his feet easily. He met a friend who noticed multiple skin patches and brought him for advice to health centre.

Discussion points:  
- Why did the slipping of chappals develop in this case?  
- How can you confirm your diagnosis – investigation?  
- What local complication may develop in the leg if he is left untreated?  
- How would you manage trophic ulcer?  
- What advice will you give him to prevent further occurrence of trophic ulcers?  
- What steps can you take to prevent such delayed detection and treatment in your area?

Case Studies: IEC

Case 19:  
A treated case of MB leprosy visits health centre with the complaints that hypo pigmented patches are not disappearing and he is still, unable to feel hot or cold by his affected hand, unable to hold things with the same hand and, is anxious to know whether he is actually cured of the disease. How will you convince the patient that disease has been cured?

Discussion points:
What is the evolution of skin lesions with treatment? (hypopigmented, erythematous lesions)
What happens to sensations and nerve function following treatment?
What can a patient with advanced and complicated leprosy expect from a cure?

Case Studies: POD

Case 20: (Role Play) - Counselling a case for better patient compliance and self-care as per given structured script of role play-

Discussion points after role play-
- What is the problem of Hari Ram?
- Since how long the problem existed?
- Why did this problem occur?
- What possible alternatives or options can be made available?
- What is counseling and how it is done?

Case study: Monitoring exercise

Case 21:
In a Block PHC X having population of 100000, while analyzing NLEP indicators of last 5 years it was found that NCDR has come down from 89 per to 10 per 100000 population but MB proportion has gone up from 25% to 60% and Disability Gr-II proportion has gone up from 3% to 10%.

Discussion points:
- How is MO PHC going to explain NLEP situation of his block in review meeting?

Case Study: Monitoring exercise

Case 22:
MPW of sub-centre X has gone on maternity leave and a new health worker has joined in her place. Medical officer of a PHC noticed that within two months there has been a sudden increase in the reporting of the leprosy affected persons with grade 2 disability from the area covered by that sub-centre.

Discussion points:
- How would you manage the situation? Outline a plan and its implementation time line.
Case Study: Monitoring exercise

Case 23: During a meeting you received the following data from the two sub-centers:

<table>
<thead>
<tr>
<th></th>
<th>Sub-centre A</th>
<th>Sub-centre B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total new cases registered</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>PB cases</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>MB cases</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Children &lt; 10 years</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>New cases with grade 2 deformity</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

Discussion points:
- Which sub-centre is doing better? Why?
- Outline steps for improving function of the other centre. Identify indicators. Create a time line

Case Study: Supervision

Case Study 24:
District Leprosy Officer examined the records & reports from PHC X and observed that the number of defaulters and wrong diagnoses are more than the district average and found the data of the report inconsistent. He decided to send supervisor to improve the situation.

Discussion & Group Work
- What are the points to be supervised and how?