Practical experience while managing Kala Azar in renovated SK Hospital, Mymensingh

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Background

- Visceral leishmaniasis (kala azar) is still one of the major rural public health problem in parts of Bangladesh.
- The disease is considered as poverty related illness, and the cost of treatment is beyond the limited financial ability of afflicted families.
- The Governments of India, Bangladesh and Nepal have launched a program to eliminate VL as a public health problem by 2015 with the optimism.

- However, as evidence is generating, there are shortcomings with the use of these drugs namely the duration of treatment and the eminent emergence of resistant parasites.
- Despite the launch of the elimination program in 2006, Bangladesh could not achieve a significant progress because of various difficulties.

- Out of an estimated 5,000 cases reported annually in Bangladesh, more than half of the total cases are reported from Mymensingh district alone.
- The referral hospital in the district is the Mymensingh Medical College Hospital (MMCH). Surya Kanta Hospital (SK Hospital) is the old hospital from where MMCH have been shifted to new buildings in 2000.

- The Ministry of Health of GOB has allocated one building (two-storied with about 15,000 sq ft floor space) to establish a Kala-azar Research Centre, which will be affiliated with Bangladesh Institute of Tropical and Infectious Diseases (BITID) located in Chittagong

Admission Criteria

- A cross sectional study was carried out to observe the pattern of Kala-azar patients admitted in a renovated SK Hospital Kala- Azar research centre.
- The suspected kala azar patients either treatment failure or with complication referred from different centre were subjected to either dipstick test (rK39) and/or Splenic puncture and slit skin smear for presence of LD body in case of PKDL.

Result

- A 30 patients were observed amongst which 10 patients with features of PKDL. Of the 20 patients 15(75%) were male, age between 6 to 55 year and almost all of them were from rural areas.

Kala Azar (Treatment failure/ Relapse)

- Thirteen patients had positive LD body on splenic puncture, of them 3 had history Kala Azar treated with tab. Miltefosine for 10 days and Inj paromomycin for 10 days about 1 -6month back.
- Four had previously treated with tab miltefosine for 28 days 8month- 3 years back found LD body 3+ positive.
- Two had history of treatment with inj SAG in different doses, duration and time period.

- One child bearing female with 2 month baby noticed Kala azar relapse cases had hisotry of treatment with Miltefosisne 2 year back. The baby was low birth2 kg term was also positive for RK-39, The breast milk of the mother was also positive to the strip.

- The baby is now only 3.5 kg , Hb-6.8 gm/dl but no fever or splenomegaly.

- One 17 year treated with single dose of ambisome followed by tab mitefosine again developed positive LD body within 6 month .
- Another 12-year-old patient, hailing from Fulbaria with history of getting inj SAG, Miltefosine and amphotericin at different period referred from MSF, Fulbaria found 1+ LD body on splenic puncture.

Fungisome (Lipid preparation)

- All were treated with Inj Liposomal Amphotericin @ 3 mg/kg for 5 days or 5 mg/kg for 3 days.
- Two patient had no complication during infusion. Two developed hypersensitivity reaction during treatment.
- One failed to administer inspite of using prophylactic Hydrocortisone and Antihistamine for control of back ache shivering and fever.
- Rest of the patients received the drug with prior prophylaxis

- AmBisome is the innovator product for Liposomal amphotericin B, produced by Gilead. It has been used in the majority of the clinical trials.
- Fungisome is a lipid containing formulation of amphotericin B and cannot be considered a true generic version of AmBisome as the formulation is different

PKDL

- Among the PKDL patients 9 had history of Kala Azar ranging from 1 year to 50 year and treated with inj SAG of different duration.
- Age of the patients were from 12 to 65 year. All were RK-39 positive but only one had slit skin smear positive.
- Three had generalized hypopigmented maculae involving face, trunk upper and lower extremity, two had limited to face.
- Two had nodular lesion involving the face, ear lobule and trunk, one only involving the chin which was found Ld body positive, and one had both nodular and hymelanotic patch all over the body.

PKDL(?Relapse)

- The patient is a 17 year unmarried girl presented with progressively increasing numbers and sizes of hypopigmented macular lesions around mouth, face and forearms very much looking like PKDL for few months.
- She never received treatment of VL, but was treated for PKDL 3 years back with 120 injections of SSG. She has the hospital prescription showing rk39 positive & SSG prescription.
- She described almost similar but many more lesions during 1st visit to hospital 3 year back, which disappeared completely following treatment.
- At present the slit skin smear is negative.

Miltefosine

- All patients are treated with tab. Miltefosine for 12 week and closely followed up to observe the improvement.

- Rest 7 patients with history of treatment of Kala azar at different time complaints of various symptoms were discharged with advice for follow up.

Conclusion

- Currently, treatment recommendations are usually based on data from endemic regions.
- There is no clear cut determination of treatment end point. Each species has a different sensitivity to the different anti-leishmanial drugs.
- Therefore, a species-specific treatment approach has been evaluated and has been used widely.
- The availability of PCR should be ensured for determination of species and prevention of drug resistance.