INFECTIOUS DISEASES (BACTERIAL, FUNGAL, VIRAL, PARASITIC, INFESTATIONS)

MORBIDITY AND MORTALITY ASSOCIATED WITH DAPSONE HYPERSENSITIVITY: A RETROSPECTIVE HOSPITAL BASED STUDY IN NEPAL

M Shah Shudi [(1)] - S Baral [(1)] - R Thapa [(2)] - D Rana [(2)] - K Neupane [(2)] - D Hagge [(2)]

The Leprosy Mission Nepal, Anandaban Hospital, Leprology, Venerology And Dermatology, Kathmandu, Nepal [(1)] - The Leprosy Mission Nepal, Mycobacterial Research Laboratories, Research, Kathmandu, Nepal [(2)]

Introduction: Dapsone hypersensitivity (DHS) is an idiosyncratic drug reaction that can occur during 2nd-8th week after the start of administration. Multi-drug therapy (MDT) for leprosy includes daily dapsone alongside clofazimine and monthly rifampicin; unfortunately, DHS is estimated to occur in up to 1-3% of leprosy patients with up to 11% mortality. The presence of Human Leucocyte Antigen allele- (HLA-) B*13:01 has been reported to have high sensitivity and specificity for DHS.

Objectives: To study the clinico-epidemiological profile, morbidity, mortality and HLA-B*13:01-based genetic risk factor associated with DHS in patients who received multi-drug therapy (MDT) for leprosy.

Materials and Methods: A retrospective chart review was performed on leprosy patients who presented with signs and symptoms of DHS and received treatment from January 2000 to December 2014 at Anandaban hospital, a tertiary leprosy referral hospital. Blood samples were drawn from previously cured DHS patients who came to Anandaban from January 2017 to August 2018 to determine the presence of HLA-B*13:01. PCR was used to determine the presence of HLA-B*13:01 allele.

Results: Among 61 patients with DHS, 15 (25%) patients had fatal outcomes. DHS developed within 8 to 143 (Median 30) days of MDT start. Common symptoms: skin rash (85.2%), fever (77%), and hepatitis (60.7%). Among 15 patients with fatal outcomes: 8 died within 8 days, 6 died within 10-15 days and 1 died after 270 days of hospital stay. Hepatic encephalopathy (40%) was the most common cause of death followed by septicemia (27%) and chronic exfoliative dermatitis (20%). Most (80%) of examined DHS patients were PCR positive for the HLA-B*13:01 allele.

Conclusion: DHS involves significant morbidity and high mortality – likely linked to delayed presentation at the referral hospital due to contextual factors. Use of qualitative molecular

determination of the presence of HLA-B*13:01 can be used to prevent occurrence of dapsone –induced hypersensitivity.