ABSTRACT

**Background:** Leprosy reaction is an acute episode in leprosy characterized by acute inflammation sometimes accompanied with systemic symptoms. Leprosy type 1 reaction often occurs in borderline leprosy patients. Leprosy type 1 reaction can cause peripheral nerve damage through neuritis that can lead to disability. Interferon-γ induced protein 10 (IP10) is a chemokine with chemotaxis function to various immune cells such as macrophage, dendritic cells, Natural Killer cells, and activated T lymphocites. Several studies have found an increase of IP10 serum level when type 1 reaction occurred.

**Purpose:** To evaluate the profile of IP10 serum levels in borderline patients with and without type 1 leprosy reaction.

**Method:** This is a descriptive cross-sectional study, with 34 borderline leprosy patients of which 17 had leprosy type 1 reaction and 17 without reaction that qualify inclusion and exclusion criteria.

**Results:** Mean serum IP10 levels in leprosy type 1 reaction groups are 594,123±327,628 pg/mL and 331,648±101,819 pg/mL in groups without reaction.

**Conclusions:** Serum IP10 levels in borderline leprosy patient is higher than patients without reaction, although confounding factors in borderline leprosy patients with type 1 reaction that can influence serum IP10 levels cannot be eliminated. Need further studies to reveal the role of IP10 in type 1 leprosy reaction.

**Keywords:** Borderline leprosy, Type 1 reaction, IP10