

DERMATOPATHOLOGY

THE EVALUATION OF IGG4, IGG AND CD138 IMMUNOHISTOCHEMISTRY IN CUTANEOUS ROSAI-DORFMAN DISEASE

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OBJECTIVE: This study aimed to investigate IgG4, IgG and CD138 immunohistochemistry in the evaluation of Rosai-Dorfman disease and to further improve the understanding of this disease.

METHODS: We retrospectively reviewed the clinicopathologic features of 23 cutaneous RDD. The expression of IgG4, IgG and CD138 in dermal tissue were evaluated by immunohistochemistry (EnVision) and quantitatively calculated by medical image analysis system.

RESULT: The patients included 14 males and 9 females, whose age were between 17 and 68 years old (mean 43). All 23 patients were cutaneous RDD. Microscopically, more than half of these patients showed the classical characteristic finding of emperipolesis. Immunohistochemical (IHC) staining showed all cases were focal positive for IgG and CD138 and 18 cases were focal positive for IgG4.

CONCLUSIONS: Cutaneous RDD is a rare, non-malignant disease characterized by certain clinical and pathological features. The presence of emperipolesis and IHC staining of histiocytes with S-100(+) CD68(+) CD1a (-) cells remain to be the mainstay of diagnosis. Positive for IgG4, IgG, CD138 and IgG4/IgG ratio, IgG4/CD138 ratio by IHC staining may be an important clue in distinguish cutaneous RDD from IgG4-RD.