Vessel wall characteristics using high-resolution magnetic resonance imaging in reversible cerebral vasconstriction syndrome and central nervous system vasculitis


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Introduction.—Distinguishing between reversible cerebral vasconstriction syndrome (RCVS) and central nervous system (CNS) vasculitis is often a diagnostic dilemma. High-resolution-3-Tesla Magnetic Resonance Imaging with contrast (HR-MRI) is a non-invasive method which has an added value to the vascular imaging by defining the intracranial vessel wall characteristics (enhancement and thickening). We have explored the utility of HR-MRI in distinguishing RCVS from CNS vasculitis.

Methods.—A retrospective analysis of all patients with a diagnosis of RCVS or CNS vasculitis that underwent HR-MRI at our institution was performed. Inclusion criteria for RCVS included acute thunderclap headache with no aneurysmal subarachnoid hemorrhage, normal cerebrospinal fluid and reversible multifocal intracranial vessel stenosis [1]. The CNS vasculitis group included patients with primary CNS vasculitis diagnosed according to the Calabrese criteria [2] in addition to one patient with Varicella Zoster CNS vasculitis. Images were reviewed by two radiologists. Demographics, clinical presentation, laboratory testing, imaging studies and outcomes were collected.

Results.—Twenty-six patients met inclusion criteria with 13 patients in each group. Median age was 52 and 42 in the RCVS and the vasculitis groups respectively. Females represented the majority in each group. Median age was 52 and 42 in the RCVS and the vasculitis groups respectively. Females represented the majority in each group.

Discussion.—Findings of enhancement of the intracranial vessel wall by HR-MRI occurred mainly in the CNS vasculitis group as compared to the RCVS group. The enhancement in RCVS group was very minimal. HR-MRI may be a useful tool in differentiating RCVS from CNS vasculitis.

Conclusion.—Further studies with larger number of cases are needed to confirm the utility of HR-MRI in the diagnosis of cerebral arteriopathies.

References

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Cryoglobulinemia

Predictors of early relapse in patients with non-infectious mixed cryoglobulinemia vasculitis: Results from the French nationwide CryoVas survey

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Introduction.—Although in most patients, induction therapy leads to complete or partial remission, relapses in patients with non-infectious mixed cryoglobulinemia vasculitis (CryoVas) remain a major problem. We aimed to identify potential predictors of early relapses occurring with the first 12 months in patients with non-infectious mixed CryoVas.

Methods.—We have included 242 patients with non-infectious mixed CryoVas diagnosed between January, 1995 and July, 2010. Patients exhibiting complete or partial remission after induction therapy and followed-up for at least 12 months were analyzed for predictors of early relapses, i.e. occurring within the first 12 months.

Results.—Forty out of the 145 patients (28%) experienced an early relapse within the first 12 months of follow-up. Relapses occurred after a median time of 9.5 months (3–12).

Baseline factors associated with an early relapse in univariate and multivariate analysis were: purpura [OR 3.35 (1.02–10.97), P = 0.046], cutaneous necrosis [OR 4.46 (1.58–12.57), P = 0.005] and articular involvement [OR 2.20 (1.00–4.78), P = 0.048].

The factors associated with an early relapse during the follow-up, i.e., the treatments used and the response to therapy, in univariate analysis were the use of corticosteroids alone (P = 0.026) and the absence of achievement of complete clinical or immunological response (P = 0.034 and 0.0005, respectively). In contrast, the initial dosage of corticosteroids and the use of plasmapheresis were not associated with lower rate of early relapse. In multivariate analysis, the only factor associated with an early relapse was the absence of complete immunological response [OR 0.07 (0.01–0.51), P = 0.009].

Conclusion.—In patients with non-infectious mixed CryoVas, predictors of early relapses are purpura, cutaneous necrosis and articular involvement. The use of combination therapy associating corticosteroids and immunosuppressive agents and the achievement of a complete immunological response were associated with lower rates of early relapse.

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