Sir,

Hydralazine can rarely induce an antineutrophil cytoplasmic antibody (ANCA)-positive vasculitis and less than 80 such cases have been reported hitherto.\textsuperscript{1,2} Here, we report the case of an elderly patient who was diagnosed with hydralazine-induced ANCA vasculitis after taking hydralazine for 5 years.

A 76-year lady presented with complaints of cough and dyspnea for one day and decreased oral intake for three weeks. She had a past history of diabetes mellitus, hypertension (on hydralazine for two years) and chronic kidney disease (baseline creatinine, 1.9 mg/dl 3 months ago with history of microscopic hematuria for 18 months). Physical examination revealed pallor and decreased air entry at both lung bases. Chest radiograph showed bilateral air-space opacities and CT chest revealed consolidation of the lingula. She was started on antibiotics for pneumonia.

Laboratory investigations were notable for anemia (hemoglobin: 7.9 g/dl) and acute kidney injury (creatinine, 4.0 mg/dl). Renal ultrasonography showed bilaterally increased renal parenchymal echogenicity. Urine microscopy showed red cell casts; and urine protein-to-creatinine ratio was consistent with non-nephrotic range proteinuria (300 mg/day). Auto-immune work-up for glomerulonephritis was requested, which was significant for anti-neutrophil antibody (ANA): positive at a dilution of 1:1280 (homogeneous pattern); anti-dsDNA antibody titer: elevated at 907 IU/L; ANCA: positive (peri-nuclear pattern); and anti-myeloperoxidase (MPO) antibody titer: elevated (104 AU/mL). Rest of the auto-immune work-up was within normal limits (Table I). Renal biopsy was performed (Figure 1), which demonstrated a pauci-immune, diffuse necrotizing, crescentic glomerulonephritis.

Based on clinical, serological and pathological findings, a diagnosis of hydralazine-induced MPO-ANCA vasculitis (renal-limited) was made. Hydralazine was stopped immediately and aggressive treatment was initiated with a combination of plasmapheresis and pulse-dose steroids. Plan was to start rituximab therapy as outpatient. Patient's renal function tests had stabilized at the time of discharge and they continued to improve on follow-up.

This patient had evidence of acute kidney injury on top of chronic kidney disease (microscopic hematuria for 18 months) while taking hydralazine for 2 years. Renal biopsy revealed a pauci-immune crescentic glomerulonephritis. Although an idiopathic ANCA vasculitis could cause similar pathologic findings, the combination of exposure to hydralazine (a drug known to cause MPO-ANCA vasculitis), serologic detection of MPO-ANCA, and elevated ANA and anti-dsDNA antibody titers in the absence of clinical manifestations of lupus were all consistent with hydralazine-induced MPO-ANCA vasculitis.\textsuperscript{3} Priming of neutrophils, for instance, due to an infection, is known to exacerbate ANCA-mediated vasculitides.\textsuperscript{4} In this case, the patient had evidence of pneumonia, which may have exacerbated an ongoing vasculitic process. Elevated anti-dsDNA antibody titers were observed in this case, which are uncommonly seen in hydralazine-induced ANCA vasculitis.\textsuperscript{2} This case

\begin{table}[h]
\centering
\caption{Results of auto-immune panel for the patient.}
\begin{tabular}{|c|c|}
\hline
Investigation & Result \\
\hline
Antinuclear antibody & Positive at a dilution of 1:1280 with a homogeneous pattern \\
Rheumatoid factor & Negative \\
Complement protein C3 level & Normal \\
Complement protein C4 level & Normal \\
Anti-dsDNA antibody & Titer elevated at 907 IU/L \\
Anti-Smith antibody & Negative \\
Anti-RNP antibody & Negative \\
ANCA screen & Positive with a peri-nuclear staining pattern \\
Anti-MPO antibody & Titer elevated at 104 AU/mL \\
Anti-PR3 antibody & Negative \\
Anti-GBM antibody & Negative \\
ASO antibody & Negative \\
Anti-IgA antibody & Negative \\
\hline
\end{tabular}
\end{table}
demonstrates that hydralazine-induced MPO-ANCA vasculitis can present in an indolent manner after a long period of latency and with concomitant elevations of ANA and anti-dsDNA antibody titers. Recognition of this peculiar clinical entity is important to avoid a misdiagnosis of idiopathic lupus nephritis, discontinue hydralazine promptly and institute appropriate treatment of a severe, organ-threatening vasculitis.

REFERENCES


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