Interval reduction in MRI lesion burden in relapsing-remitting multiple sclerosis following an integrative alternative medicine regimen: a case report

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Case Report

Keywords: Multiple sclerosis, Relapsing-remitting multiple sclerosis, MRI, Complementary and alternative medicine, Homeopathy, Case report

Posted Date: July 14th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-10316886/v1

Additional Declarations: The authors declare no competing interests.

Abstract

Background: Multiple sclerosis (MS) is a chronic inflammatory demyelinating disorder of the central nervous system in which magnetic resonance imaging (MRI), cerebrospinal fluid findings, evoked potentials, and clinical follow-up remain central to diagnosis and monitoring. Many patients with MS also explore complementary or alternative approaches for symptom relief, although the evidence base for disease modification remains limited and inconsistent.

Case presentation: A 38-year-old man with a 10-year history of relapsing-remitting MS presented with worsening fatigue, muscle weakness, numbness, tremor, impaired coordination, and unsteady gait despite prior corticosteroid-based relapse management. Brain MRI demonstrated multiple demyelinating lesions, and ancillary testing showed inflammatory cerebrospinal fluid findings and delayed sensory pathway conduction. The patient received an integrative regimen consisting of Gnaphalium, Arsenicum album, Echinacea purpurea, Gelsemium, Sulfur, and Kalium phosphoricum, together with physiotherapy, strengthening exercises, gait training, and lifestyle counseling.

Outcomes: Follow-up MRI demonstrated a reduction in enhancement and lesion burden compared with baseline imaging. Reported supraventricular white matter lesions decreased from 24 to 18, while total supratentorial lesions decreased from 107 to 59. Selected lesions reduced in size, and two previously measured lesions were reported as resolved. Whole-spine MRI did not show definite enhancing plaques at follow-up. Biochemical testing was largely within reference limits, with mild abnormalities in selected hematologic parameters.

Conclusion: This case documents temporal radiological improvement after multimodal management that included an alternative medicine regimen and rehabilitation. Because MS is relapsing-remitting and the case lacks a control comparator, standardized disability scores, exact dosing, and long-term follow-up, causality cannot be inferred. The report is best interpreted as hypothesis-generating and supports the need for careful neurologic monitoring and prospective evaluation of any adjunctive intervention.

1. Introduction

Multiple sclerosis (MS) is an immune-mediated disorder of the central nervous system characterized by inflammation, demyelination, gliosis, and neuroaxonal injury. Patients may present with visual disturbance, sensory symptoms, limb weakness, imbalance, tremor, fatigue, bladder dysfunction, or cognitive symptoms, and disease activity may fluctuate over time [1, 2]. Relapsing-remitting MS (RRMS) remains the most common clinical phenotype and is defined by episodes of neurological worsening followed by partial or complete remission.

Diagnosis relies on integration of clinical history, neurological examination, MRI evidence of lesion dissemination in space and time, cerebrospinal fluid markers, and exclusion of mimicking disorders. The 2017 McDonald criteria strengthened the diagnostic use of MRI and cerebrospinal fluid oligoclonal bands, while the 2024 revisions further emphasize updated neuroimaging and biomarker approaches,

including the optic nerve as an additional anatomical location and emerging MRI markers in selected contexts [2, 3]. In clinical practice, serial MRI remains essential for monitoring inflammatory activity, lesion burden, and treatment response [4].

Disease-modifying therapies are the cornerstone of RRMS management and are intended to reduce relapse frequency, suppress MRI activity, and limit disability accumulation [5, 6]. Alongside standard care, many individuals with MS explore complementary and alternative medicine (CAM) for fatigue, pain, anxiety, sleep disturbance, and general well-being [7–9]. However, evidence that homeopathic or alternative remedies can modify the underlying disease course of MS remains insufficient, and positive claims require cautious interpretation [9, 10].

This report presents a patient with RRMS who showed interval reduction in MRI lesion burden following an integrative regimen that included several alternative medicines, physiotherapy, and lifestyle counseling. The case is reported in a structured manner aligned with CARE reporting principles to improve transparency and to avoid over-attribution of causality from a single uncontrolled observation [11].

2. Case presentation and methods

2.1. Patient information and clinical findings

A 38-year-old male patient with a 10-year history of MS presented to Islamabad Diagnostic Center, Pakistan, with worsening fatigue, muscle weakness, numbness, and difficulty with coordination over several months. He had previously received corticosteroid-based treatment, including Depo-Medrol injections, which reportedly reduced relapse frequency and severity. At presentation, he reported impaired fine motor control, unsteady gait, and difficulty with tandem walking. Neurological examination described reduced muscle strength, tremors, impaired finger-to-nose testing, and decreased lower-limb sensation.

The uploaded clinical record contained inconsistent gender pronouns in a few places; therefore, the present manuscript consistently describes the de-identified patient as male in accordance with the initial case description. Patient identifiers were not included in the manuscript.

2.2. Diagnostic assessment

The patient underwent brain MRI, whole-spine MRI, cerebrospinal fluid assessment, evoked potentials, and biochemical investigations. Baseline brain MRI demonstrated multiple lesions in the brain consistent with MS activity. The spinal tap reportedly showed elevated protein and white blood cell levels, supporting inflammatory activity. Evoked potentials demonstrated delayed conduction in sensory pathways, compatible with demyelination. The patient was diagnosed clinically as having relapsing-remitting MS with radiological evidence of active disease.

MRI comparisons were based on the reported radiological descriptions and embedded before-and-after MRI images supplied in the source document. Lesion counts and selected lesion dimensions were extracted from the submitted case file. Because the original record did not provide a standardized Expanded Disability Status Scale (EDSS) score, volumetric lesion segmentation protocol, MRI field strength, exact sequence parameters, or exact timing between scans, these limitations are explicitly acknowledged.

2.3. Therapeutic intervention

The patient received an integrative alternative medicine regimen that included Gnaphalium, Arsenicum album, Echinacea purpurea, Gelsemium, Sulfur, and Kalium phosphoricum. Monthly doses of Sulfur and Kalium phosphoricum were also described. The exact dose, potency, route, manufacturer, and treatment duration were not documented in the source material and should be added by the authors before journal submission if available.

The patient was also referred for physiotherapy, strengthening exercises, and gait training. He was counseled regarding regular exercise, balanced diet, lifestyle optimization, and prompt reporting of new or worsening symptoms. The intervention was therefore multimodal, and any observed outcome cannot be attributed to one component of treatment.

2.4. Follow-up and outcome assessment

Follow-up assessment focused on interval MRI findings, reported lesion counts, selected lesion dimensions, enhancement pattern, spinal MRI findings, and available biochemical tests. The main outcome was radiological interval change rather than a validated disability endpoint. Laboratory values were interpreted descriptively against the reference ranges supplied in the original report.

Table 1
Clinical timeline and diagnostic summary of the reported multiple sclerosis case.

Stage	Key findings
Long-standing disease history	A 38-year-old male patient with approximately 10 years of prior MS diagnosis and relapse-directed corticosteroid-based care.
Recent clinical worsening	Fatigue, muscle weakness, numbness, tremor, impaired fine motor function, poor coordination, unsteady gait, and difficulty with tandem walking.
Diagnostic work-up	Brain MRI, whole-spine MRI, cerebrospinal fluid assessment, evoked potentials, neurological examination, and biochemical testing.
Baseline interpretation	Brain and spinal lesions were considered compatible with active relapsing-remitting MS; CSF and evoked potentials supported inflammatory demyelinating disease.
Intervention	Alternative medicine regimen containing Gnaphalium, Arsenicum album, Echinacea purpurea, Gelsemium, Sulfur, and Kalium phosphoricum, plus physiotherapy and lifestyle advice.
Follow-up outcome	Reduced MRI enhancement and lesion burden were reported; selected lesions decreased in size or resolved.

3. Results

3.1. Brain MRI findings

Compared with the initial MRI, follow-up imaging showed reduced post-contrast enhancement in the right temporal gyrus lesion and a lower number of supraventricular white matter lesions. The source report described 24 supraventricular white matter lesions at baseline, with the largest measuring 11 mm, compared with 18 lesions at the corresponding follow-up site, with the largest measuring 10 mm.

A broader lesion-count comparison also showed a reduction in total supratentorial lesions from 107 at baseline to 59 at follow-up. Individual lesion comparisons showed variable reductions: a right frontal lobe lesion decreased from 7.4 x 8 mm to 6.3 x 6.7 mm; a left frontal supraventricular white matter lesion decreased from 14 x 7 mm to 11 x 7 mm; a right frontal subcortical white matter lesion measuring 5 x 9 mm was reported as resolved; and a left parietal periventricular lesion measuring 5.9 x 7 mm was also reported as resolved.

3.2. Whole-spine MRI findings

Initial whole-spine MRI described at least two subtle T2-bright areas opposite C2-C3 and C4, with the larger lesion measuring approximately 11 mm. On follow-up, a subtle ill-defined T2 high-signal area right of midline opposite C4 measured approximately 11 mm, and another subtle T2-bright signal opposite C2-C3 measured approximately 6 mm. The reported follow-up findings did not show post-contrast

enhancement in these areas. No definite abnormal nodular meningeal enhancement or focal enhancing lesion was identified in the cervicothoracic or lumbar spine to suggest active enhancing plaques.

Other reported findings included preserved brainstem and spinal cord signal outside the described subtle areas, intact spinal curvature, no definite spondylolisthesis, preserved vertebral body heights and intervertebral disc spaces, no definite disc bulge or canal stenosis, and unremarkable posterior elements and paraspinal soft tissues.

3.3. Biochemical and hematological findings

Available biochemical results were generally within the stated laboratory reference ranges. ESR was 5 mm/1 hour, C-reactive protein was 3.4 mg/L, creatinine was 0.8 mg/dL, and hemoglobin was 14.0 g/dL. Mildly increased mean corpuscular volume, mean corpuscular hemoglobin, eosinophil percentage, and absolute eosinophil count were noted relative to the supplied reference ranges. These values are not specific for MS activity and were interpreted descriptively.

Table 2
Hematological and biochemical findings reported in the multiple sclerosis case.

Diagnostic test	Result	Reference range	Interpretation
ESR	5	0–15 (M); 0–20 (F) mm/1Hr	Within range
WBC count	9,630	4,000–11,000 /mm3	Within range
RBC count	4.43	4.5-6.0 mil/mm3	Slightly low
Hemoglobin	14.0	14.0–18.0 g/dL	Lower limit of range
Hematocrit	44	40–50%	Within range
MCV	99	80–95 fL	Mildly high
MCH	32	27–31 pg	Mildly high
MCHC	32	32–36 g/dL	Within range
RDW-CV	13	11–16%	Within range
Platelet count	150,000	140,000-425,000 /mm3	Within range
Neutrophils	65	50–70%	Within range
Lymphocytes	19	25–40%	Low percentage
Monocytes	08	2–10%	Within range
Eosinophils	08	0–4%	High percentage
Absolute neutrophil count	6,190	2,500-7,000 /mm3	Within range
Absolute lymphocyte count	1,830	1,500-4,000 /mm3	Within range
Absolute monocyte count	720	200-1,000 /mm3	Within range
Absolute eosinophil count	730	100–500 /mm3	High
Creatinine (capillary blood)	0.8	< 1.2 mg/dL	Within range
C-reactive protein	3.4	Negative 0–5; positive > 5 mg/L	Negative range

Table 3
Summary of key MRI interval changes extracted from the supplied radiology description.

MRI variable	Baseline finding	Follow-up finding	Interpretation
Right temporal gyrus enhancement	Focal lesion with intense enhancement	Non-significant enhancement at corresponding region	Reduced enhancement reported
Supraventricular white matter lesions	24 lesions; largest 11 mm	18 lesions; largest 10 mm	Lower lesion count and slightly smaller largest lesion
Total supratentorial lesions	107 lesions	59 lesions	Reduced lesion burden
Right frontal lobe lesion	7.4 x 8 mm	6.3 x 6.7 mm	Reduced dimensions
Left frontal supraventricular white matter lesion	14 x 7 mm	11 x 7 mm	Reduced dimensions
Right frontal subcortical white matter lesion	5 x 9 mm	Resolved	Resolved on follow-up report
Left parietal periventricular white matter lesion	5.9 x 7 mm	Resolved	Resolved on follow-up report
Spinal enhancement	Subtle T2 bright areas described	No post-contrast enhancement in described areas	No definite enhancing spinal plaque reported

4. Discussion

This case describes interval radiological improvement in a patient with long-standing RRMS following multimodal management that included a reported alternative medicine regimen, physiotherapy, and lifestyle modification. The most notable findings were the reduction in total supratentorial lesion count from 107 to 59, reduction in supraventricular white matter lesions from 24 to 18, reduced enhancement in a previously active lesion, and resolution or size reduction of selected lesions. These findings may be clinically interesting because MRI lesion burden is a key marker used in MS monitoring [2–4].

However, interpretation must remain cautious. RRMS can naturally fluctuate, and inflammatory lesions may enhance, fade, shrink, or become less conspicuous over time independent of a specific alternative intervention. The patient had also received conventional corticosteroid-based relapse management historically, and physiotherapy/lifestyle measures were added. Without standardized EDSS scores, relapse rate documentation, objective functional testing, serial MRI timing, exact sequence parameters, and a control comparison, the observed radiological changes cannot establish efficacy or disease reversal.

Many patients with MS use CAM, often for fatigue, pain, anxiety, sleep, and perceived general well-being [7, 8]. The remedies described in this case have reported pharmacological or historical alternative-medicine uses, including anti-inflammatory, immune-modulatory, or neurological symptom-oriented claims in the broader literature [12–17]. Nevertheless, systematic evaluations of homeopathy and CAM have not provided convincing evidence that homeopathic remedies modify the MS disease course, and positive findings from uncontrolled case observations should not replace evidence-based disease-modifying therapy [9, 10].

For that reason, the manuscript uses the phrase “interval reduction in MRI lesion burden” rather than “reversal” or “cure.” The latter terms may overstate the evidence and may be challenged by reviewers. A stronger future report would include the exact formulation, dose or potency, route, treatment duration, adherence assessment, adverse-event monitoring, relapse history, EDSS, Multiple Sclerosis Functional Composite score, fatigue scale, quality-of-life measures, and blinded neuroradiology review of standardized MRI sequences.

From a clinical perspective, the case supports continued follow-up rather than therapeutic certainty. Patients using adjunctive alternative medicines should remain under neurologist supervision, should not discontinue disease-modifying therapy without medical advice, and should be monitored for relapse activity, disability progression, medication interactions, and adverse effects. Controlled observational cohorts or prospective pilot studies would be required before any claims of disease-modifying benefit can be considered.

5. Conclusion

This case report documents reduced MRI lesion burden and decreased enhancement in a 38-year-old male patient with relapsing-remitting MS after a multimodal regimen that included alternative medicines, physiotherapy, and lifestyle measures. The observation is clinically interesting but cannot demonstrate causality because of the single-patient design, relapsing-remitting disease biology, prior conventional therapy, and incomplete intervention details. The case should be presented as a cautious, hypothesis-generating report and followed by standardized neurological assessment and prospective research.

Declarations

Author contributions

Conceptualization: Muhammad Rehan Uppal and Umar Saeed. Clinical data curation: Muhammad Rehan Uppal, Rizwan Uppal, and Muhammad Saad Uppal. Manuscript drafting and revision: Umar Saeed, Rizwan Uppal, Imaad Ur Rehman, and Muhammad Saad Uppal. All authors should review and approve the final manuscript before submission.

Ethics approval and consent to participate

Ethical approval status and institutional review requirements should be confirmed by the authors before submission. Because this is a single-patient case report using de-identified clinical and radiological information, journal requirements may vary.

Consent for publication

Written informed consent for publication of anonymized clinical details and MRI images should be obtained from the patient before submission and retained by the corresponding author.

Funding

No external funding was reported in the source material.

Conflicts of interest

The authors should declare any financial, clinical, institutional, or product-related conflicts of interest. If none exist, state: The authors declare no conflicts of interest.

Data availability

The de-identified data supporting this case report are available from the corresponding author upon reasonable request, subject to patient consent and institutional policies.

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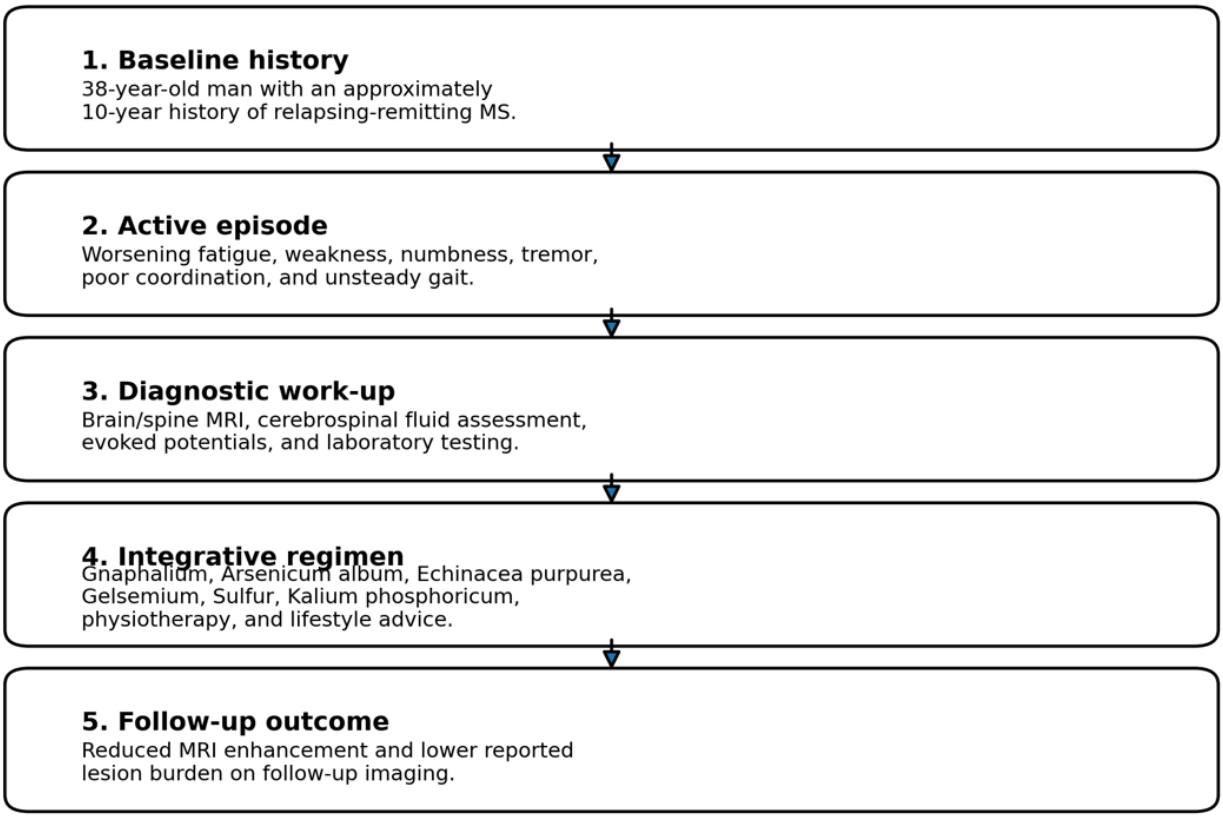
Figures



Case-report timeline summarizing the diagnostic and follow-up pathway.

Figure 1

Case-report timeline. The figure summarizes the clinical pathway from long-standing relapsing-remitting multiple sclerosis and recent neurological worsening to diagnostic work-up, multimodal intervention, and follow-up MRI assessment.

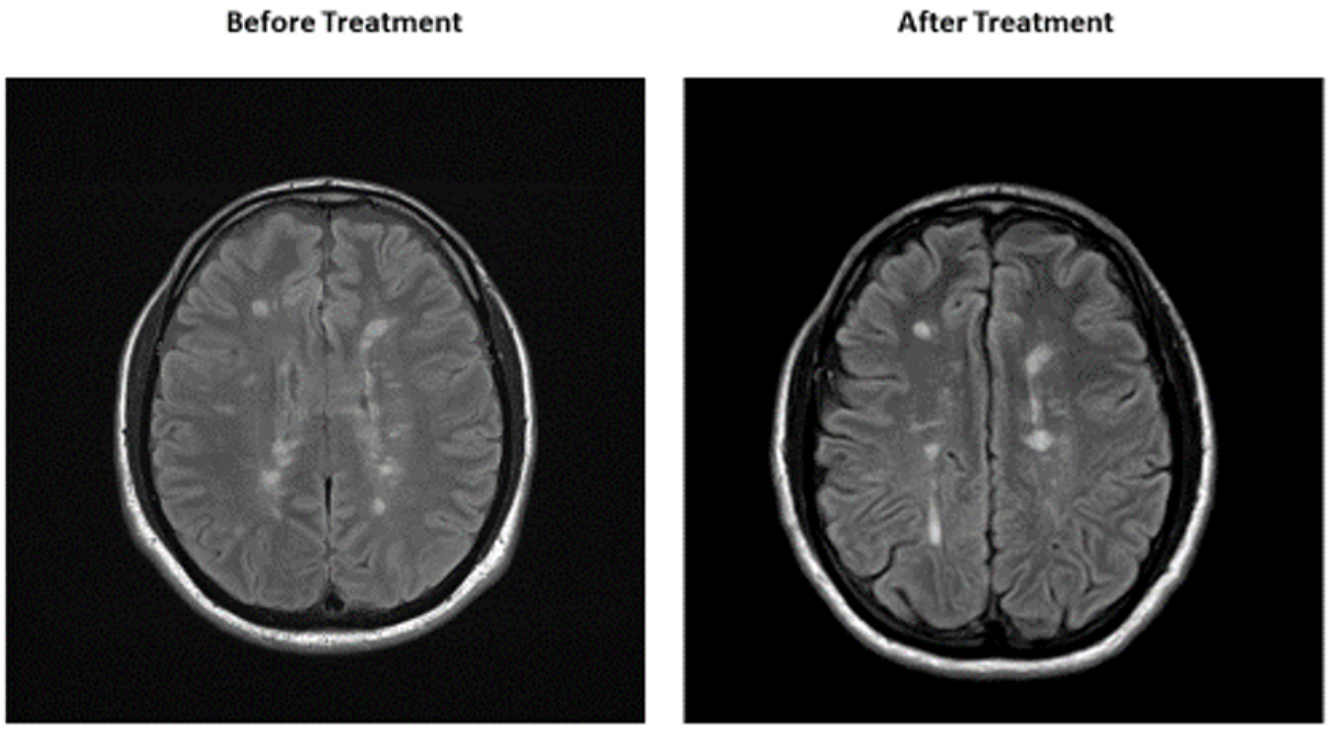


Figure 2

Baseline and follow-up brain MRI comparison. The supplied MRI panels show axial images before and after the reported integrative regimen. The follow-up image was described as showing reduced enhancement and interval reduction in disease process compared with baseline imaging.

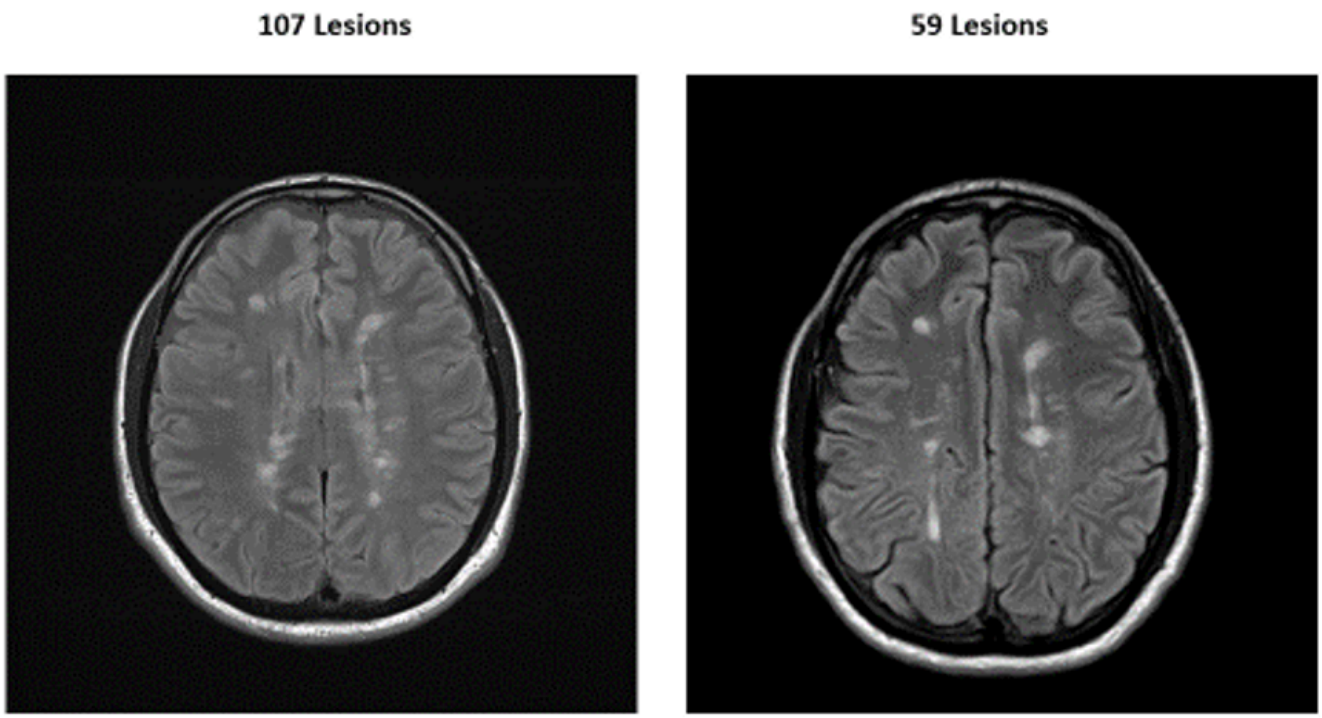


Figure 3

Lesion burden comparison on supplied MRI panels. The original report labels the baseline scan as having 107 supratentorial lesions and the follow-up scan as having 59 lesions, indicating a lower visible lesion burden at follow-up.

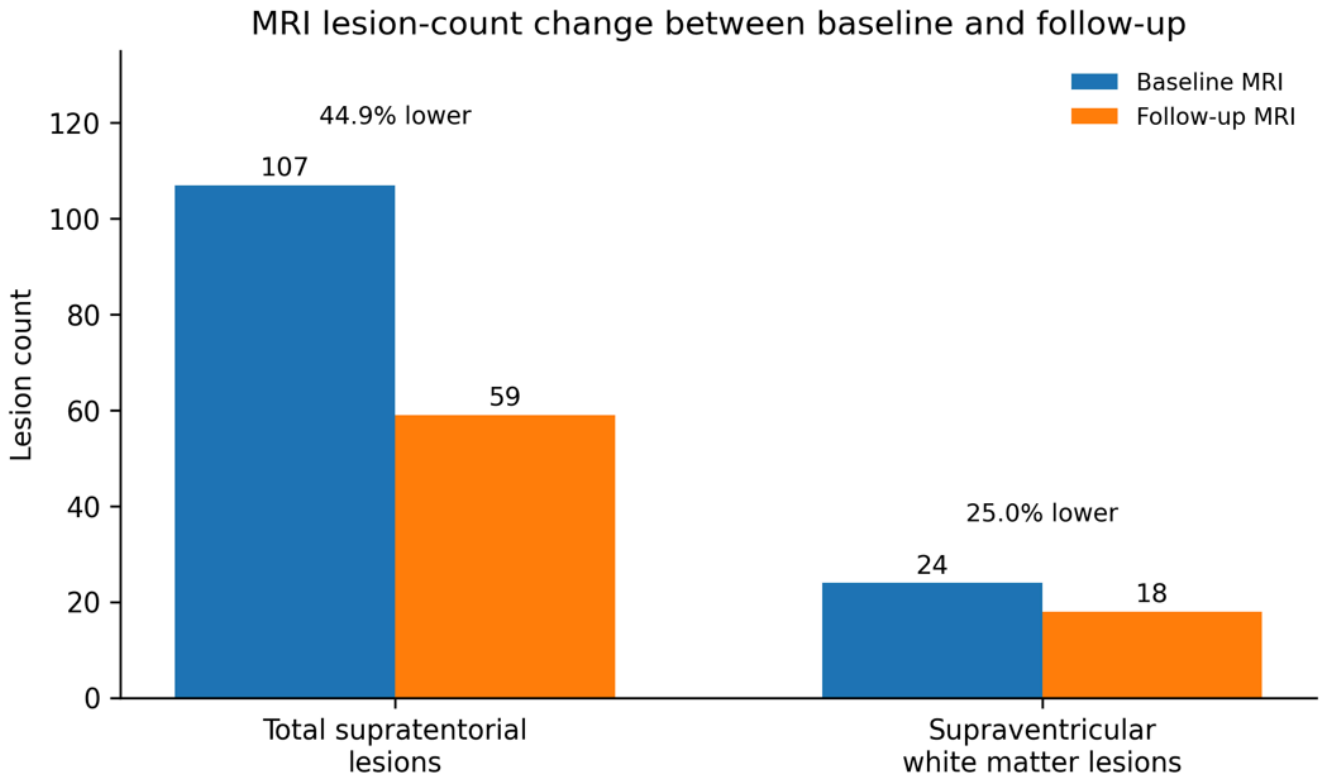


Figure 4

Lesion-count changes extracted from the source report. Total supratentorial lesions decreased from 107 to 59, and supraventricular white matter lesions decreased from 24 to 18 between baseline and follow-up MRI examinations.

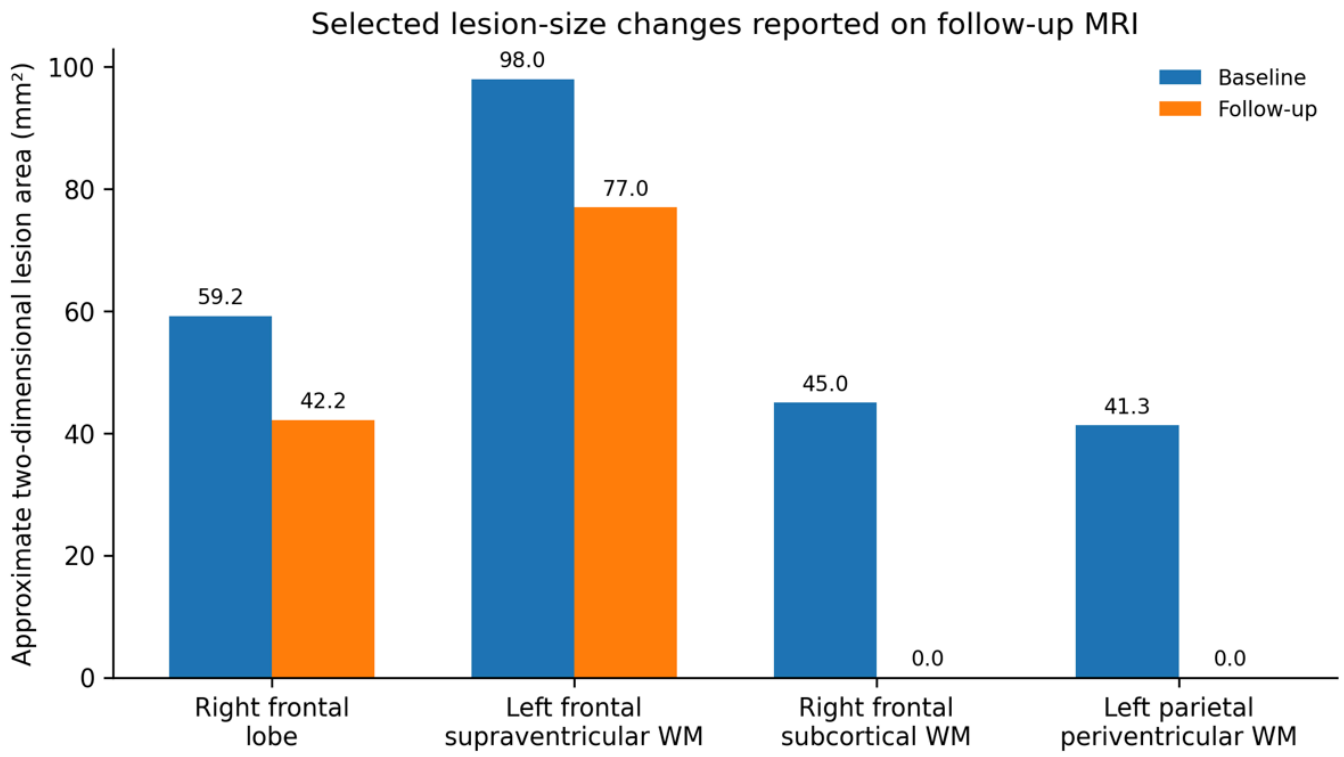


Figure 5

Selected lesion-size changes reported in the case file. Approximate two-dimensional areas were calculated from the provided anteroposterior and transverse measurements for visualization only; they should not be interpreted as volumetric lesion segmentation.