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CASE REPORT

Chronic Non-Specific Wrist Pain With Clinical Improvement Following Progressive Resistance Training: A Case Report

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Abstract

We report the case of a patient with a five-year history of chronic non-specific right wrist pain, with normal wrist radiographs and routine blood investigations and no definitive diagnosis established. Advanced imaging (MRI) was not performed. Prior medical treatment and physiotherapy provided only temporary or limited benefit. The patient independently began a structured progressive resistance and upper-limb strengthening exercise program in July 2025 and subsequently reported substantial improvement in pain and function, sustained at follow-up in June 2026. Standardized objective outcome measures were not prospectively collected, and detailed exercise-prescription parameters were not documented in the clinical record; these are acknowledged as limitations. Because this is a single observational case without prospectively collected outcome measures or a control condition, the observed improvement should be interpreted as a temporal association with progressive resistance training rather than evidence of a causal effect. This case may support further systematic study of progressive loading approaches in chronic non-specific wrist pain.

Keywords

Wrist pain; progressive resistance training; exercise therapy; case report; musculoskeletal rehabilitation.

Introduction

Progressive resistance exercise is widely used within musculoskeletal rehabilitation programs, and systematic reviews have described its physiological rationale and general therapeutic effects across a range of conditions.[1,2] Resistance training induces measurable neuromuscular adaptations that may contribute to functional recovery.[3]

However, evidence specifically evaluating exercise therapy for hand and wrist conditions remains comparatively limited and heterogeneous, with exercise dosage often insufficiently described in the published literature.[4] Systematic reviews of resistance-exercise dosing in tendinopathy have highlighted similar limitations in the specificity of prescribed loading parameters,[5] and comparable findings have been reported for related upper-limb tendinopathies such as lateral elbow tendinopathy, where exercise-based interventions show modest but real benefit over passive treatment.[6]

Findings from these other musculoskeletal or upper-limb conditions should not be assumed to establish efficacy for chronic non-specific wrist pain specifically, and in the present case no definitive structural diagnosis was established. We report this case to describe the temporally associated clinical improvement observed after a patient-initiated progressive resistance training program, while explicitly acknowledging the limits of causal inference from a single unblinded observation.

Case Presentation

A patient presented with chronic right wrist pain of approximately five years' duration. Wrist radiographs and routine blood investigations were reported as normal, and no definitive structural or systemic diagnosis was established on prior work-up. Magnetic resonance imaging or other advanced imaging was not performed. Detailed physical-examination findings at initial and subsequent assessments (including exact pain location and character, aggravating/relieving factors, swelling, deformity, tenderness, active/passive range of motion, resisted-movement pain, grip strength, sensory findings, neurovascular status, and provocative test results) are not documented in the clinical record available to the authors and are not reported here rather than being estimated retrospectively.

The patient received prior medical treatment and physiotherapy over the preceding years, with only temporary or limited benefit. In July 2025, the patient independently began a structured exercise program incorporating progressive resistance training and upper-limb strengthening (Figures 1–2). Specific exercise-prescription parameters (exercises performed, frequency, load/intensity, sets and repetitions, progression protocol, duration, supervision status, and adherence) were not documented and are not reported rather than being presented as an artificially precise protocol.

The patient reported substantial improvement in pain and functional capacity in the months following initiation of the exercise program. At follow-up in June 2026, symptoms were reported as no longer significantly limiting daily activities. Standardized objective outcome measures (serial pain scores such as VAS/NRS, grip-strength measurement, goniometric range of motion, or validated patient-reported wrist outcome instruments such as PRWE or DASH) were not prospectively collected. The reported improvement is therefore based on the patient's clinical report of reduced symptoms and improved functional capacity and should not be interpreted as an objectively quantified treatment effect.

Clinical Timeline

Time point	Clinical status / intervention
2020	Onset of chronic right wrist pain (as reported).
2020–2025	Multiple medical consultations, medication and physiotherapy; only temporary or limited benefit reported.
Prior assessment	Routine blood investigations and wrist X-rays reported as normal; no definitive diagnosis established.
July 2025	Patient independently began a structured exercise program incorporating progressive resistance and upper-limb strengthening.
Subsequent months	Patient reported substantial improvement in pain and function.
June 2026 follow-up	Symptoms reportedly no longer significantly limited daily activities.
Limitation	No MRI/advanced imaging and no prospectively collected standardized

	objective outcome measures available in the supplied manuscript.

Figures

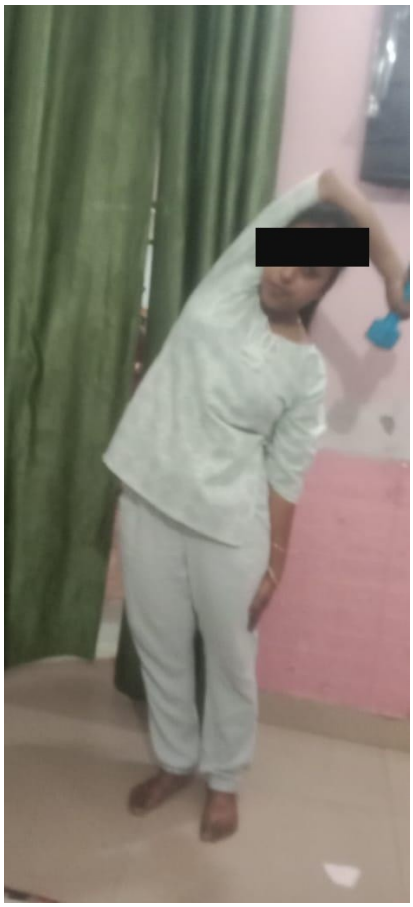


Figure 1. Patient performing a supervised upper-limb progressive resistance exercise (lateral trunk side-bend stretch with light dumbbell, right arm), illustrative of the strengthening program described in the Case Presentation. Eye region masked per editorial figure-selection decision (15 Sept 2026) to protect patient identity. Published with written patient consent.

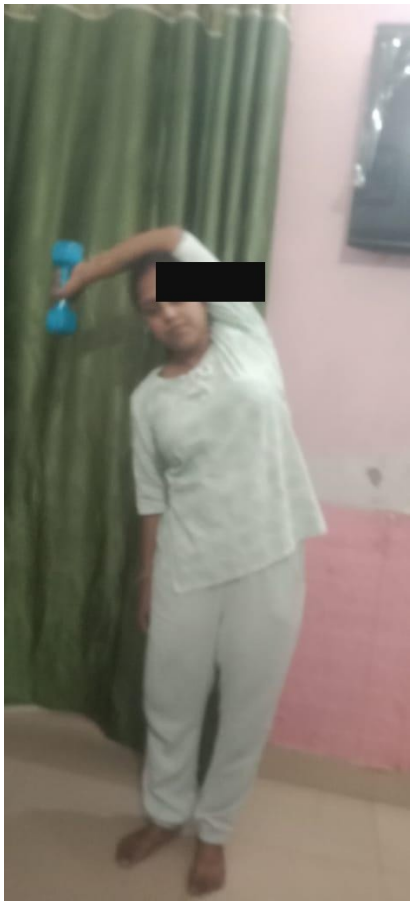


Figure 2. Patient performing a further upper-limb strengthening exercise from the same program (left arm). Eye region masked per editorial figure-selection decision (15 Sept 2026) to protect patient identity. Published with written patient consent.

Discussion

This case is presented as chronic non-specific wrist pain, reflecting a clinical classification rather than a definitive structural diagnosis. The absence of MRI or other advanced imaging limited the ability to exclude occult structural pathology, including tendon/tenosynovial, ligamentous, cartilaginous, or occult osseous disorders, and this is acknowledged as a limitation of the diagnostic work-up.

In this patient, substantial self-reported clinical improvement occurred temporally after the initiation of progressive resistance training. Because this is a single observational case without prospectively collected standardized outcome measures or a control condition, no causal relationship can be established. The case may nevertheless support further systematic study of progressive loading approaches in chronic non-specific wrist pain.

The observed improvement in this patient is consistent with the broader literature supporting progressive resistance exercise as an effective component of musculoskeletal rehabilitation.[1,2] Resistance training is understood to produce neuromuscular adaptations that may underlie improvements in strength and function.[3] However, evidence specific to hand and wrist conditions remains limited, and existing studies frequently under-report the exercise dose actually delivered,[4,5] a limitation that also applies to this case, in which exercise-prescription parameters were not prospectively documented. Comparable caution is warranted based on data from related upper-limb tendinopathies, where exercise-based interventions demonstrate real but modest benefit over passive treatment.[6]

Findings from these other musculoskeletal and upper-limb conditions should not be assumed to establish efficacy for chronic non-specific wrist pain, and no definitive structural diagnosis was established in this case. The improvement described here should therefore be interpreted as a temporal association only, warranting further systematic study rather than being taken as evidence of a specific therapeutic effect.

Conclusion

This case describes substantial self-reported clinical improvement occurring temporally after a patient-initiated progressive resistance training program in a patient with chronic non-specific wrist pain. As a single observational case without prospectively collected standardized outcome measures or a control condition, it cannot establish a causal relationship, but it may support further systematic study of progressive loading approaches in this condition.

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Declarations

Ethics Approval

Formal institutional ethics committee approval was not required for this single-patient case report, in accordance with standard institutional policy for case reports.

Consent for Publication

Written informed consent was obtained from the patient for publication of this case report and the accompanying clinical information and photographs. The patient was informed that identifying information would not be disclosed.

Conflict of Interest

None declared (per original submission).

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Author Contributions

KSK contributed to conception of the report, clinical management of the patient, and drafting of the manuscript. SJ contributed to clinical supervision, review of the case, and critical revision of the manuscript. Both authors approved the final manuscript.