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CLINICAL EVIDENCE

Improvement in chronic Gastrointestinal and multi-system Autonomic symptoms in a 38-year-old female concomitant with Knee Chest Upper Cervical Chiropractic care: A Case Report

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Background: A 38-year-old female instructor presented with a 7-year history of chronic gastrointestinal symptoms (nausea, oesophageal and upper-abdominal pain, bloating, and a sensation of reflux rising into the throat), alongside neck and shoulder stiffness, bilateral finger paraesthesia, tinnitus and ear fullness, dizziness, palpitation, bilateral temporal and occipital headache, and jaw tightness. The patient carried a prior medical diagnosis of generalised anxiety disorder (GAD), for which she was taking clonazepam, and was concurrently managed with esomeprazole and domperidone for gastrointestinal symptoms.

Intervention: Knee Chest Upper Cervical (KCUC) Chiropractic care was directed at a working finding of vertebral subluxation complex at C1, identified through postural, orthopaedic and thermographic assessment and confirmed radiographically. The correction was delivered in the standard prone knee-chest position; the patient was rested seated, rather than supine, in the recovery room following each adjustment because of her reflux symptoms. Care was delivered twice weekly, tapering to weekly.

Outcomes: Baseline Bournemouth Questionnaire (BQ) score was 70/70. By the eleventh follow-up visit (16 August 2024) the patient reported roughly 80% improvement in her gastrointestinal symptoms, had discontinued esomeprazole after approximately two years of use, and reported complete resolution of headache, jaw tightness and finger paraesthesia, and improved sleep. The patient paused care after 33 of a planned 36 visits without a formal discharge assessment; she subsequently returned to the practice, and at a follow-up visit on 31 July 2026 her BQ score had fallen to 17/70, a 75.7% reduction from baseline. She is now managed on a maintenance/check-up schedule. No adverse events were reported during the course of care.

Conclusion: This case describes a temporal association between KCUC care and marked, sustained improvement in chronic, multisystem gastrointestinal and autonomic symptoms in a patient with comorbid GAD, with a 75.7% reduction in BQ score (70/70 to 17/70) documented at follow-up despite a pause in active care. As a single, uncontrolled case, causation cannot be inferred; the report is offered as hypothesis-generating and as a contribution to the case-report evidence base for upper cervical Chiropractic and visceral/autonomic presentations.

Indexing Terms: Chiropractic; Subluxation; Knee Chest Upper Cervical; gastrointestinal dysfunction; generalised anxiety disorder; autonomic nervous system.



> *… at a follow-up visit on 31 July 2026 a repeat BQ was completed, scoring 17/70, a reduction of 53 points, or 75.7%, from baseline …'*

Background

Upper cervical Chiropractic techniques share a common theoretical premise: that the craniocervical junction, given its proximity to the brainstem and its role in postural and proprioceptive regulation, is a clinically significant site for the assessment and correction of vertebral subluxation. The Knee Chest Upper Cervical (KCUC) procedure is one of several articular-model upper cervical protocols descended from the work of BJ Palmer, using a knee-chest patient position and radiographic analysis to guide a precise, low-force correction of the atlas.

Chronic functional gastrointestinal symptoms frequently present alongside anxiety and other autonomic complaints, consistent with the recognised bidirectional relationship between the gut and the central nervous system, the 'gut-brain axis'. This case is reported to add to the case-based literature examining the relationship between upper cervical chiropractic care and multisystem, autonomically-mediated presentations.

Patient history

A 38-year-old female, employed as an instructor, presented with a seven-year history of chronic gastrointestinal symptoms comprising nausea, pain localised to the oesophagus and upper abdomen, bloating, and a sensation of something rising from the stomach into the throat. Onset of these symptoms coincided with a diagnosis of generalised anxiety disorder (GAD) seven years earlier, made by the patient's medical team. She additionally reported neck and shoulder stiffness, bilateral finger numbness and tingling, tinnitus and ear fullness, dizziness and vertigo of eight months' duration, heart palpitation, bilateral temporal and occipital headache, and jaw tightness.

At presentation the patient was taking esomeprazole (two years) for gastrointestinal symptoms, domperidone for nausea, and clonazepam (nine months) for anxiety. She had previously trialled homeopathy without documented benefit, and a three-month course of physiotherapy that she reported helped her dizziness. Family history was notable for type 2 diabetes mellitus in her father. She reported no smoking, alcohol or substance use, an active lifestyle including regular Pilates practice, and approximately two hours of daily screen use.

Clinical findings

Postural observation identified a left head tilt. Cervical range of motion was unremarkable. Static weight-bearing analysis showed asymmetric distribution of 33.25 kg on the left and 28.5 kg on the right (a 4.75 kg leftward lean), with a left short leg on prone leg check, which was accentuated on left head rotation. Upper-limb manual muscle testing, cranial nerve screening, cervical distraction and compression testing, deep tendon reflexes, and Romberg testing were all unremarkable.

Diagnostic imaging

A standard five-view cervical radiographic series (lateral cervical, base posterior, and APOM neutral, left and right lateral flexion) was obtained (Figures 1 - 5). Radiological findings showed loss of the normal cervical lordosis with straightening of the cervical spine, moderate narrowing of the C5/6 disc space with mild osteophytosis at C5 and C6, and mild osteophytic lipping at C4, without loss of vertebral height.

The atlanto-axial articulation was unremarkable and the lateral atlanto-dental intervals were symmetrical bilaterally. An incidental finding of left-sided sinusitis with a narrowed nasal septum was also noted on imaging.

Figure 1: Lateral cervical radiograph.



Figure 2: Base posterior radiograph.

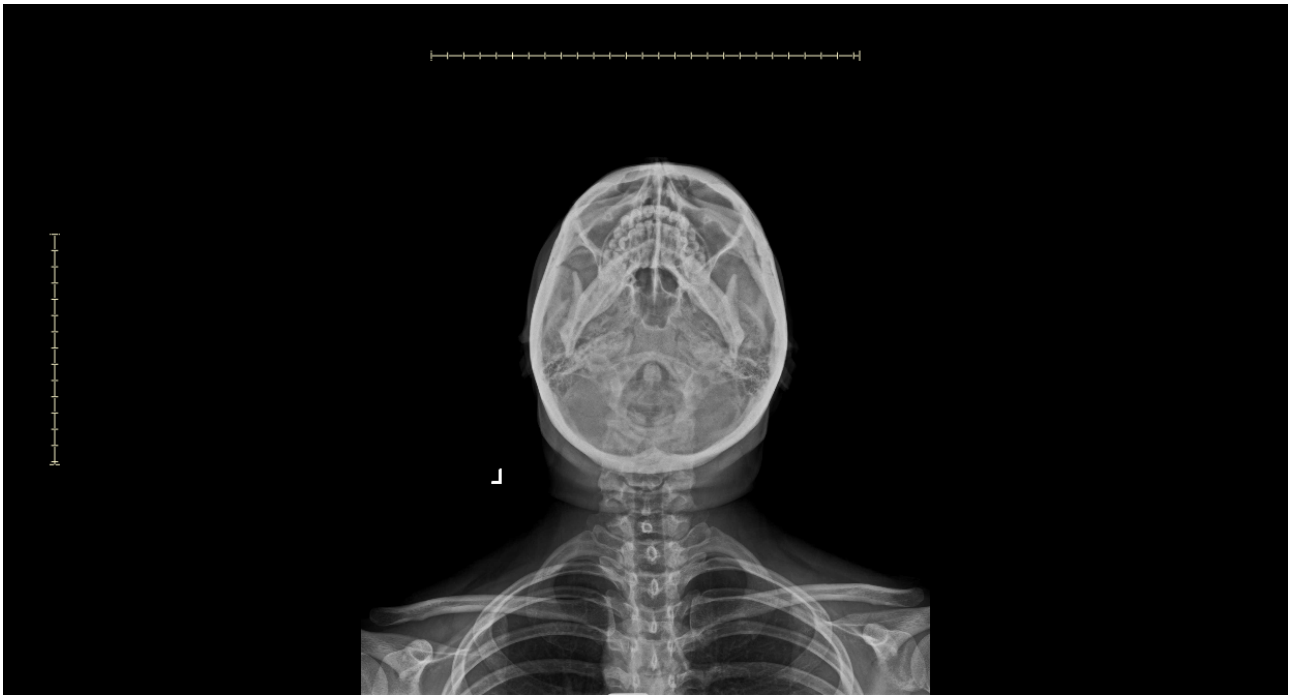


Figure 3: APOM (anterior-posterior open mouth) neutral radiograph.



Figure 4: APOM right lateral flexion radiograph.



Figure 5: APOM left lateral flexion radiograph.



Serial computed paraspinal thermography was performed as part of this practice's standard pre-adjustment assessment protocol, with a baseline scan at the initial visit (4 July 2024; Figure 6) and a further re-scan approximately three months into care (3 October 2024; Figure 7). As in the authors' other published case reports, thermography was used as an adjunct clinical assessment of paraspinal thermal asymmetry, employed to support, rather than independently

establish, the presence of subluxation; it does not itself constitute a validated diagnostic or outcome measure, and radiographic confirmation was used as the reference standard for the subluxation finding reported below.

Qualitatively, the baseline scan showed a marked bilateral thermal asymmetry pattern, most pronounced in the upper cervical/occipital region, while the three-month re-scan showed a visibly reduced deviation from thermal symmetry through most of the cervical region compared with baseline.

Figure 6: APOM left lateral flexion radiograph. Baseline paraspinal thermography, 4 July 2024 (initial consultation; pre- and serial post-adjustment scans). Free-text clinical comments have been redacted from the scan header; dates and reference values are preserved.

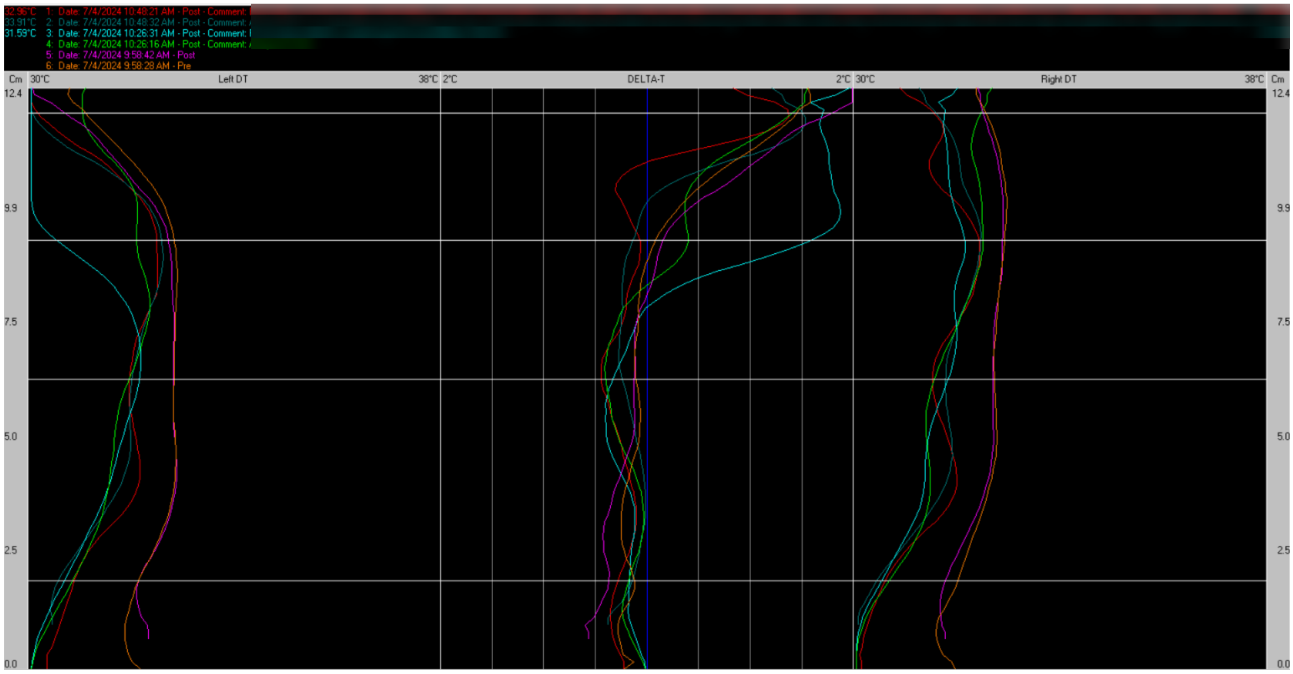
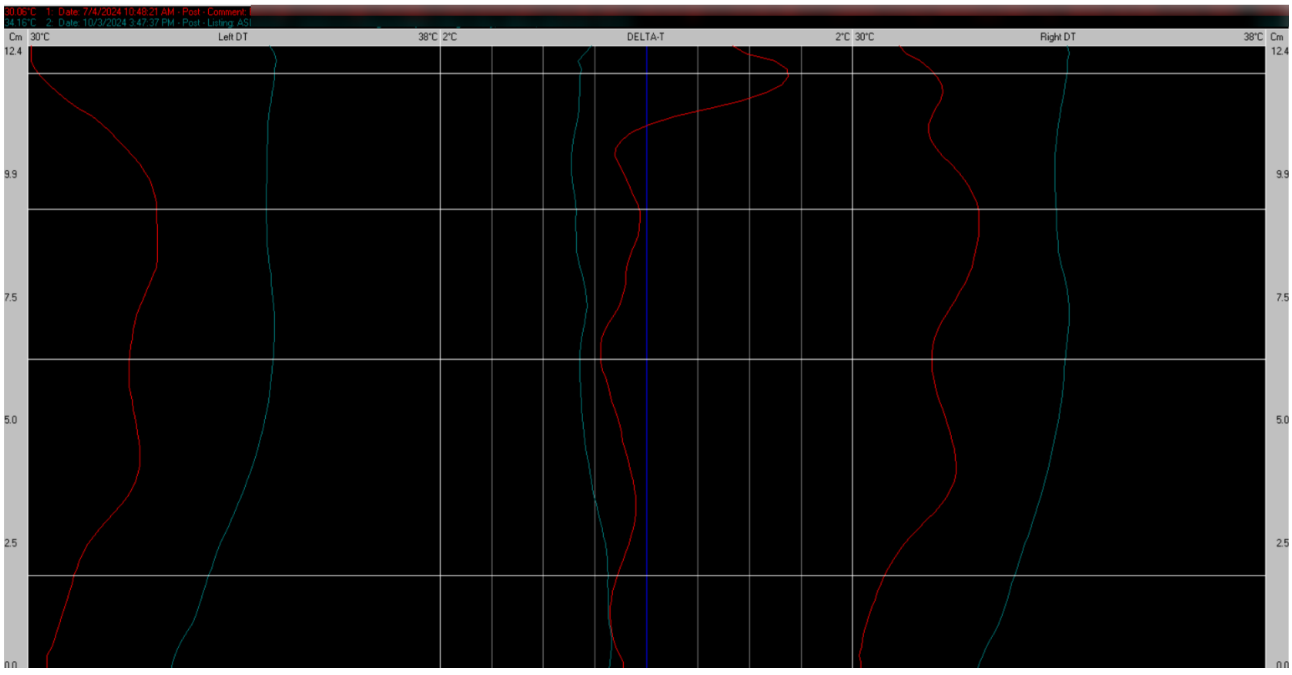


Figure 7: Paraspinal thermography at approximately three months of care, 3 October 2024 (red = baseline, cyan = follow-up). Free-text clinical comments have been redacted from the scan header; dates and reference values are preserved.



Diagnosis

On the basis of postural, orthopaedic and radiographic findings, a working Chiropractic diagnosis of vertebral subluxation complex at C1 was made. The patient's generalised anxiety disorder is recorded here as the working medical diagnosis established by her treating medical team; it was not independently confirmed by the authors and is not presented as a Chiropractic diagnosis.

Given the multisystem, partly functional nature of the presenting symptoms, differentials considered by the referring medical team reportedly included primary anxiety-related and functional gastrointestinal disorders; central or vestibular contributions to the dizziness were not radiologically excluded, as no MRI or CT had been obtained at the time of writing.

Intervention

KCUC care

KCUC care was delivered following standard procedure, with the patient positioned prone in the standard knee-chest posture for the correction itself. The one variation from standard procedure occurred in the recovery room; the patient rested seated, rather than supine, following each adjustment, because of her acid-reflux symptoms. The correction followed the KCUC model of a precise, low-force contact to the atlas, with vector and contact point determined by the radiographic analysis described above.

Care plan

Visit frequency was set at twice weekly initially, gradually reducing to once weekly, over a planned corrective course of 36 visits across an anticipated 4 to 6 months, with no changes made to the treatment plan during that phase.

The patient attended 33 of the 36 planned visits before a pause in care, without a formal discharge assessment. She has since returned to the practice and is currently receiving maintenance care.

Outcomes

Objective and patient-reported

Baseline Bournemouth Questionnaire (BQ) score, taken on 4 July 2024, was 70/70, the maximum possible score on this instrument. At the 11th (eleventh) follow-up visit (the 12th visit overall counting the initial consultation as visit one), on 16 August 2024, the patient reported marginal improvement in her gastrointestinal symptoms at that point in care and stated she had discontinued esomeprazole (Nexium), which she had previously used for approximately two years, together with complete resolution of headache and jaw tightness, resolution of finger

numbness and tingling, and improved sleep quality. By the same milestone she described roughly an 80% improvement in her gastrointestinal symptoms overall.

The patient paused care after 33 of the planned 36 visits without a formal discharge assessment. She subsequently returned to the practice, and at a follow-up visit on 31 July 2026 a repeat BQ was completed, scoring 17/70, a reduction of 53 points, or 75.7%, from baseline.

She is now managed on a maintenance/check-up schedule rather than active corrective care. The table below summarises the reported timeline.

Table 1: Care summary

Visit / Date	Clinical event
4 July 2024 (Visit 1)	Initial consultation. History, postural and orthopaedic/neurological examination, standard 5-view cervical radiographic series, baseline thermography scan, baseline Bournemouth Questionnaire (BQ) 70/70.
Visit 1 onward	KCUC care commenced in the standard prone knee-chest position, with the patient rested seated (rather than supine) in the recovery room due to acid-reflux symptoms; frequency twice weekly, tapering to weekly.
16 August 2024 (11th follow-up visit; 12th visit overall)	Interim review: patient reported ~80% improvement in gastrointestinal symptoms; discontinued esomeprazole (Nexium), previously used for approximately two years; headache and jaw tightness resolved; finger numbness/tingling resolved; sleep improved.
3 October 2024 (approx. 3 months)	Thermography re-scan; medications at this point recorded as clonazepam 1.25 mg 1–2/day, plus agomelatine (Valdoxan) and a ginkgo biloba extract (Tebonin Forte).
Visit 33 (final visit of initial corrective phase)	Patient paused care, having completed 33 of the planned 36-visit corrective course; no formal discharge assessment or corrective-phase BQ was obtained. Improvements noted at the 16 August 2024 review – including discontinuation of esomeprazole – had been reported as sustained up to this point.
31 July 2026 (follow-up visit)	Patient returned to the practice and completed a repeat BQ, scoring 17/70 (down from a baseline of 70/70, a 75.7% reduction). She is now managed on a maintenance/check-up schedule.

Patient perspective

> 'Jessey has helped me get through my acid reflux issues. I started feeling better starting session 4. As of session 13 I have 90% relief from my symptoms. Thank you Jessey, this has given me a better quality of life. I am so thankful to Jessey. The Vitality team is amazing; they are very helpful in every step of the way. Wonderful experience at Vitality'.

This account, given in the patient's own words, is broadly consistent with the clinical record; she describes symptomatic improvement beginning around the 4th visit and roughly 90% relief by the 13th visit, compared with the approximately 80% improvement in gastrointestinal symptoms, and discontinuation of esomeprazole, documented in clinical notes at the 16 August 2024 (11th follow-up) review. The two figures are close enough to be considered concordant, with the small difference plausibly reflecting one additional visit and the retrospective, whole-experience framing typical of patient testimonials versus a same-visit clinical rating.

Adverse events

No adverse reactions or side effects were reported during the course of care.

Discussion

This case is of interest for the co-occurrence of chronic, treatment-resistant gastrointestinal symptoms with GAD and a constellation of other autonomically-mediated complaints (palpitation, dizziness, tinnitus), in a patient whose cervical radiographs demonstrated loss of normal lordosis and a working finding of upper cervical subluxation.

The reported improvement in gastrointestinal and associated symptoms following the commencement of KCUC care is, at this stage, a temporal association only, and no causal or mechanistic claim is made.

A proposed, explicitly hypothetical, mechanism

One hypothesis under active discussion in the Chiropractic literature is that correction of upper cervical subluxation may influence autonomic balance, given the proximity of the craniocervical junction to brainstem centres governing cardiovascular, respiratory and gastrointestinal regulation.

Small studies have reported shifts toward parasympathetic activity following cervical adjustment, and a proposed visceral link between upper cervical/craniocervical dysfunction and gastrointestinal symptoms (framed by Rome & Waterhouse as a 'vertebrogenic dyspepsia syndrome') has been discussed in the Chiropractic literature.

This remains a hypothesis; the mechanism by which any change in autonomic tone might translate into the specific symptom pattern reported here (nausea, reflux sensation, bloating) has not been established by controlled research, and the patient's separately diagnosed and pharmacologically managed GAD is itself a well-recognised driver of functional gastrointestinal symptoms via the gut-brain axis.

Limitations

- This is a single, uncontrolled case, and no inference of efficacy or causation can be drawn from a temporal association alone.
- The patient did not complete a formal discharge assessment at the end of the initial corrective phase (33 of 36 planned visits); a repeat BQ was instead obtained roughly two years after baseline, at a follow-up visit that also marked the start of a maintenance/check-up phase, so no interim outcome measures document her status during the gap between these two assessments.
- The follow-up BQ score was taken at what the patient and practice now regard as a maintenance/check-up stage of care rather than at a defined, pre-planned discharge point, which limits direct comparison with case reports using a fixed corrective-phase endpoint.
- Gastrointestinal and autonomic symptom improvement is based on patient self-report rather than objective, validated gastrointestinal outcome measures.
- The patient's GAD and its pharmacological management (clonazepam, domperidone, and esomeprazole, the latter discontinued during the corrective phase of care) are important potential confounders that were not controlled for.
- Central or vestibular contributions to the patient's dizziness were not excluded by cross-sectional imaging (MRI/CT), as none had been obtained.
- Thermography findings from the baseline scan were not fully available to the authors at the time of writing and are noted as a documentation gap to be resolved before submission.

Conclusion

In this patient, a temporal association was observed between the commencement of Knee Chest Upper Cervical care, directed at a working finding of C1 subluxation, and marked improvement in a longstanding, multisystem pattern of gastrointestinal and autonomic symptoms occurring alongside generalised anxiety disorder.

Gains reported during the initial corrective phase were reflected at a follow-up visit roughly two years after baseline, at which the patient's BQ score had fallen from 70/70 to 17/70 (a 75.7% reduction); she is now managed on a maintenance/check-up schedule.

Given the gap between the initial corrective phase and this follow-up assessment, the absence of interim outcome measures, and the case's single-subject, uncontrolled design, these findings are offered as hypothesis-generating rather than confirmatory. They add to a small body of

chiropractic case literature exploring links between upper cervical care and visceral/autonomic presentations, and support further, more rigorously controlled inquiry into this relationship.

Informed consent

Written informed consent for Chiropractic care and for the publication of anonymised clinical details, including the patient's own words, was obtained from the patient using Vitality Chiropractic Centres' standard in-house consent documentation, which covers both clinical care and the publication of case material. This is the same consent form and process previously accepted for a published case report by Cureus. No identifying images or personal details are included in this report.

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