

Early Clinical Response to Physiotherapy in Suspected Guillain–Barré Syndrome: A Case Report

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Abstract

Background: Guillain–Barré syndrome (GBS) may cause acute weakness, areflexia, pain, respiratory symptoms, and severe functional limitations requiring supportive rehabilitation.

Objective: To describe the early clinical response during inpatient physiotherapy in a patient with tetraparesis clinically suspected to be associated with GBS.

Methods: A 24-year-old woman with symmetrical ascending tetraparesis, bilateral areflexia, and normal sensory findings received two consecutive physiotherapy sessions during hospitalization. Interventions included transcutaneous electrical nerve stimulation, active-assisted and passive range of motion, static cervical contraction, strengthening, bridging, breathing exercises, stretching, and soft tissue release. Outcomes included Manual Muscle Testing, Numeric Rating Scale pain scores, deep tendon reflexes, thoracic expansion, Modified Borg Dyspnea Scale, Berg Balance Scale, and Barthel Index. Data were analyzed descriptively.

Results: Resting pain decreased from 2 to 1/10, upper trapezius tenderness from 5 to 3/10, thoracic tenderness from 4 to 3/10, and movement-related pain from 8 to 6/10. Muscle strength remained 2/5. Biceps, triceps, and patellar reflexes remained absent bilaterally, whereas thoracic expansion and Borg scores were unchanged. The Berg Balance Scale remained 0, and the Barthel Index score was 30, indicating severe dependence. No adverse event was reported.

Conclusion: Pain decreased during two physiotherapy sessions, whereas neuromuscular, balance, and respiratory-related outcomes remained unchanged. These observations describe a short-term clinical course and cannot establish the efficacy or general safety of the multimodal physiotherapy program or its individual components.

Keywords

Guillain–Barré Syndrome; Physical Therapy Modalities; Pain; Muscle Weakness; Rehabilitation

Introduction

Guillain–Barré syndrome (GBS) is an acute immune-mediated disorder affecting the peripheral nervous system and is clinically characterized by progressive weakness and reduced or absent tendon reflexes.¹ Sensory disturbances, pain, autonomic dysfunction, and respiratory involvement may also occur, although the clinical presentation and severity vary substantially among patients.¹ Global epidemiological evidence has demonstrated geographical variation in the incidence of GBS, while recent reports continue to show that the condition may be associated with substantial morbidity and mortality.^{2,3} The clinical course may progress rapidly, making early assessment and close monitoring important, particularly when weakness involves multiple extremities or when respiratory and autonomic manifestations are present.^{1,4}

During the acute phase, patients with GBS may experience symmetrical weakness, impaired mobility, pain, reduced exercise tolerance, and limitations in activities of daily living.^{1,5} Prolonged immobility may further contribute to secondary complications, including reduced physical capacity and deconditioning.⁶ However, recovery is heterogeneous and neurological improvement may require a substantially longer period than the initial phase of hospitalization.⁷ Consequently, short-term changes observed over only a few treatment sessions should be interpreted cautiously and should not be considered evidence of neurological recovery or treatment efficacy.

Rehabilitation is an important component of supportive management in patients with GBS.¹ Depending on the patient's clinical condition and tolerance, physiotherapy may involve positioning, range of motion exercises, respiratory interventions, symptom management, progressive exercise, and functional rehabilitation.⁸ Nevertheless, the available evidence remains heterogeneous, and evidence regarding the optimal type, intensity, timing, and dosage of physiotherapy interventions during the earliest acute phase remains limited.^{9,10} More recent rehabilitation studies have explored exercise-based approaches and technology-assisted interventions; however, much of this literature concerns later stages of recovery rather than the immediate inpatient period.^{11,12}

Pain may represent an additional clinical problem requiring careful management during the acute phase.³ Transcutaneous electrical nerve stimulation (TENS) has been investigated as a non-pharmacological modality for pain modulation and may provide a theoretical rationale for symptom management through peripheral sensory stimulation and modulation of nociceptive processing.¹³ However, when TENS is administered as part of a multimodal physiotherapy program, any observed clinical change cannot be attributed to TENS alone. Changes in symptoms may also be influenced by concurrent interventions, positioning, medical treatment, spontaneous clinical variation, and the natural course of the underlying condition. This distinction is particularly important in a case report with a short observation period and no comparison condition.

Case reports can provide clinically relevant documentation of patient presentation, treatment implementation, and changes observed during routine clinical care when the available information is reported transparently.¹⁴ The CARE (Case Report) guideline

provides a framework for improving the completeness and interpretability of case-based reporting.¹⁵ In the context of acute neurological conditions, transparent reporting is particularly important because diagnostic certainty, intervention parameters, outcome selection, and the duration of observation can substantially influence the interpretation of clinical findings.

The present case concerns a 24-year-old woman hospitalized with symmetrical ascending tetraparesis and bilateral areflexia. The available clinical documentation identified the condition as tetraparesis with suspected GBS, reportedly established by a neurologist. The diagnosis was based on the available clinical presentation and examination findings, including the pattern of weakness and absent reflexes. Sensory examination was reported as normal. However, cerebrospinal fluid analysis, nerve conduction studies, and electromyography were not available in the clinical record, and the formal diagnostic reasoning or criteria used by the treating physician were not documented in detail. In addition, no documented differential diagnosis was available in the record. These limitations require that the condition be described cautiously as clinically suspected GBS rather than a definitively confirmed diagnosis.

A non-contrast multislice computed tomography examination also reportedly demonstrated a hypodense lesion in the pons. The available clinical documentation did not clarify whether this finding was incidental, clinically relevant, or associated with another neurological process. Therefore, the lesion cannot be interpreted as evidence supporting GBS and is considered an unresolved diagnostic finding within the limitations of the available record. This diagnostic uncertainty is relevant to the interpretation of the case and is reported transparently rather than being resolved through assumptions.

The patient received two consecutive physiotherapy sessions consisting of a multimodal intervention package that included TENS, active-assisted and passive range of motion exercises, cervical static contractions, strengthening exercises, bridging, pursed-lip breathing, segmental breathing, thoracic expansion exercises, stretching, and soft tissue release. Clinical monitoring and intervention modification were based on available physiological status, respiratory condition, fatigue, muscle strength, pain, neurological symptoms, and autonomic symptoms. The short observation period and concurrent administration of multiple interventions prevent causal attribution of any observed changes to a specific modality.

The purpose of this case report was to describe the early clinical response observed during two consecutive inpatient physiotherapy sessions in a patient with tetraparesis clinically suspected to be associated with GBS. Repeated outcomes included muscle strength, pain, deep tendon reflexes, thoracic expansion, perceived dyspnea, balance, and functional dependence. The report is descriptive and does not aim to establish treatment efficacy, causal relationships, or the general safety of the physiotherapy interventions. Instead, it documents the patient's short-term clinical course while highlighting the importance of detailed diagnostic information, reproducible intervention reporting, objective outcome assessment, and longer follow-up in future reports of physiotherapy management during acute neurological illness.

Methods

This study was prepared as a single-patient case report describing the early clinical course observed during inpatient physiotherapy. Reporting was structured according to the CARE (CAsE REport) guideline, with additional attention to the description of physiotherapy assessment, intervention parameters, repeated outcomes, and clinical monitoring.¹⁵ The report was based on information available from the clinical record, physiotherapy documentation, laboratory findings, and information subsequently confirmed by the authors. No data were estimated or added when they were not available in the documented record.

The patient was a 24-year-old woman hospitalized at Rumah Sakit Khusus Daerah Dadi, Makassar, Indonesia, with tetraparesis clinically suspected to be associated with Guillain–Barré syndrome (GBS). According to the available information, the diagnosis was established by a neurologist on March 25, 2026, and documented as tetraparesis with suspected GBS. The diagnostic information available to the authors was based on the clinical history, pattern of weakness, neurological examination, and available laboratory findings. The clinical presentation included symmetrical weakness involving all four extremities, with an ascending pattern in which the lower extremities were more severely affected than the upper extremities.³ Sensory examination was reported as normal, while biceps, triceps, and patellar reflexes were absent bilaterally.

Cerebrospinal fluid examination through lumbar puncture, nerve conduction studies, and electromyography were not available. The reason why these investigations were not performed was not explicitly documented in the available medical record. Similarly, no formal differential diagnosis or documented explanation of how alternative causes of tetraparesis were evaluated was available. A non-contrast multislice computed tomography examination reportedly demonstrated a hypodense lesion in the pons. However, the available clinical documentation did not clarify the significance of this finding or whether it was considered related to the neurological presentation. Therefore, the lesion was reported descriptively and was not interpreted as evidence supporting GBS. The patient underwent physiotherapy assessment before the first treatment session. The assessment included anamnesis, observation, palpation, examination of muscle strength, pain assessment, deep tendon reflex examination, perceived dyspnea, thoracic expansion, balance, functional dependence, and review of available physiological and laboratory findings. Muscle strength was assessed using Manual Muscle Testing across the cervical, shoulder, elbow, wrist, hip, knee, and ankle regions. At the initial assessment, muscle strength was recorded as grade 2/5 in all assessed regions. The same measurement was repeated during the second documented physiotherapy session.

Pain was assessed using the Numeric Rating Scale ranging from 0 to 10 under resting, palpation, and movement conditions. The recorded pain outcomes included resting pain, upper trapezius tenderness, thoracic tenderness, and movement-related pain. Deep tendon reflexes of the biceps, triceps, and patella were assessed bilaterally and recorded as absent when no reflex response was observed. Perceived dyspnea was assessed using the Modified Borg Dyspnea Scale. Thoracic expansion was measured using a measuring tape by calculating the difference between maximal inspiration and maximal expiration at the axillary, mammary, and xiphoid levels.

Balance was assessed using the Berg Balance Scale (BBS). The patient obtained a score of 0 at both the first and second documented assessments, indicating a high risk of falling. Functional dependence was assessed using the Barthel Index, with a recorded score of 30, indicating severe dependence. Available physiological findings included peripheral oxygen saturation of 99%, respiratory rate of 22 breaths/min, heart rate of 54 beats/min, and blood pressure of 93/57 mmHg. These physiological findings were reported descriptively as available clinical parameters and were not treated as repeated outcome measures unless documented at more than one time point.

Available laboratory findings were also reviewed because of their clinical relevance to the patient's overall condition. Sodium and potassium concentrations were recorded on three occasions. On March 24, 2026, sodium was 127 mmol/L and potassium was 1.8 mmol/L. On March 27, 2026, sodium was 145 mmol/L and potassium was 2.2 mmol/L. On March 28, 2026, sodium was 160 mmol/L and potassium was 2.2 mmol/L. The laboratory reference ranges were 135 to 145 mmol/L for sodium and 3.5 to 5.0 mmol/L

for potassium. The patient also had a history of diarrhea with a reported frequency of three episodes per day. However, no documented investigation establishing the cause of the electrolyte abnormalities was available; therefore, no causal relationship was inferred.

Physiotherapy was provided during two consecutive treatment sessions. Active-assisted range of motion (AAROM) was performed in the cervical, shoulder, elbow, wrist, hip, knee, and ankle regions with the patient in a supine position. The intervention consisted of six repetitions in one set, with a total duration of approximately five minutes per session. Passive range of motion (PROM) was performed in the supine position and targeted the cervical, shoulder, and hip regions. PROM consisted of six repetitions in two sets and was delivered for approximately five minutes during each session.

Transcutaneous electrical nerve stimulation (TENS) was administered at the beginning of each session using an Enraf-Nonius device in conventional mode with a biphasic asymmetric pulse waveform. The frequency was 80 to 100 Hz, and the pulse width was 50 to 80 μ s. The patient remained in the supine position with the cervical region maintained in a neutral position. Electrodes were placed bilaterally in paravertebral areas corresponding to muscles reported to have spasm, including the upper trapezius, levator scapulae, and the lower cervical to upper thoracic paraspinal region. Stimulation intensity was adjusted according to patient tolerance within an approximate range of 10 to 15 mA, and TENS was administered for 10 minutes.

Static cervical contractions were performed isometrically in the supine position with the head supported and the cervical spine maintained in a neutral position. The exercises included cervical flexion, extension, lateral flexion, and rotation at a light intensity of approximately 20% to 30% of the patient's maximal ability. Each contraction was maintained for eight seconds and performed for three repetitions in one set, with a rest interval of approximately 20 to 30 seconds. The intervention lasted approximately five minutes per session.

Strengthening exercises targeted the quadriceps, hamstrings, hip abductors, and hip adductors in the supine position. Isometric contractions were performed according to patient ability at a light intensity of approximately 20% to 30% of maximal ability. Each contraction was maintained for eight seconds and performed for three repetitions in one set, with a rest interval of 30 to 60 seconds. Active-assisted strengthening of the upper extremities involved the shoulder, elbow, and wrist and was performed in the supine position with assistance from the physiotherapist according to the patient's ability. Each region was trained for eight repetitions in one set, with a rest interval of 30 to 60 seconds. Strengthening exercises lasted approximately five to ten minutes per session.

Bridging was performed in the supine position with the knees flexed to approximately 90 degrees. The exercise consisted of three repetitions in two sets, with a four-second hold and a 30-second rest interval between sets. The total duration was approximately one minute per session. Cervical stretching was performed in the supine position while the physiotherapist supported the patient's head and cervical spine. Passive cervical flexion, bilateral lateral flexion, and bilateral rotation were performed slowly according to tolerance. Each movement was maintained for 15 seconds and repeated three times in one set, with an approximately 20-second interval between repetitions or movement directions. The total stretching duration was approximately five to ten minutes. Soft tissue release targeted the upper trapezius, levator scapulae, sternocleidomastoid, and suboccipital muscles. The patient remained in the supine position with the head supported in a neutral position. Gentle soft tissue release was performed using slow longitudinal stroking and sustained pressure at light to moderate intensity. The intervention lasted approximately five minutes, with approximately 30 to 60 seconds applied to each targeted area.

Respiratory interventions consisted of pursed-lip breathing, segmental breathing, and thoracic expansion exercises. Pursed-lip breathing was performed in a semi-Fowler position of approximately 30° to 45°. The patient was instructed to inhale through the nose for approximately two seconds and exhale slowly through pursed lips for approximately four seconds. The exercise consisted of six repetitions in two sets, with a rest interval of 30 to 60 seconds or longer when needed for comfort. Segmental breathing was performed in either the semi-Fowler or supine position and targeted mid-thoracic and lower thoracic expansion using tactile and verbal cues. Thoracic expansion exercises were performed in the semi-Fowler position and consisted of deep nasal inspiration, gentle breath holding for approximately one to two seconds, and slow oral expiration. Both interventions consisted of six repetitions in two sets with rest intervals of approximately 30 to 60 seconds.

The intervention parameters were maintained without documented changes between the first and second sessions. Clinical monitoring and decisions to initiate, modify, reduce, or discontinue an intervention were based on vital signs, respiratory status, fatigue, muscle strength, pain, neurological symptoms, and autonomic symptoms. No specific progression of exercise intensity was documented during the two-session observation period.

Outcome timing was defined as T0, the initial physiotherapy assessment before treatment; T1, the first physiotherapy session and its associated clinical evaluation; and T2, the second physiotherapy session and its associated clinical evaluation. Because the available documentation did not provide sufficiently precise information to distinguish a separate standardized post-treatment measurement immediately after each session, the findings at T1 and T2 are reported according to the documented session-associated evaluations. Data were analyzed descriptively by comparing the recorded findings across the documented time points. No inferential statistical analysis was performed because this report involved a single patient and a short observational period.

No adverse event was reported during the two documented physiotherapy sessions. No further physiotherapy follow-up was performed because the patient was no longer referred for physiotherapy after the second session. According to the information confirmed by the authors, the patient died two days after the second physiotherapy session. The available documentation did not establish a causal relationship between the physiotherapy interventions and the patient's death.

Results

The patient was a 24-year-old woman who received two consecutive physiotherapy sessions during hospitalization for symmetrical ascending tetraparesis clinically suspected to be associated with Guillain–Barré syndrome (GBS). The initial physiotherapy assessment was defined as T0, followed by the first physiotherapy session and its associated clinical evaluation at T1 and the second session and associated evaluation at T2. The available documentation did not provide separate standardized post-treatment measurements immediately after each intervention. Therefore, changes were reported descriptively according to the recorded findings associated with the first and second sessions.

At the initial assessment, the patient presented with symmetrical weakness involving all four extremities, with greater involvement of the lower than upper extremities. Sensory examination was reported as normal, whereas biceps, triceps, and patellar reflexes were absent bilaterally. Muscle strength was graded 2/5 in all assessed cervical, upper-extremity, and lower-extremity regions. The patient also reported pain, movement difficulty, mild perceived dyspnea, and marked functional dependence. The clinical timeline is presented in Table 1 to clarify the sequence of assessment, intervention, and outcome evaluation. Physiotherapy was delivered during two consecutive sessions, with the intervention parameters maintained without documented

modification between sessions. No subsequent physiotherapy follow-up was performed. According to the information confirmed by the authors, the patient died two days after the second physiotherapy session; however, the available record did not establish the cause of death or any relationship between the physiotherapy intervention and this outcome.

Table 1. Timeline of Clinical Assessment and Physiotherapy

Time Point	Clinical Event
T0	Initial physiotherapy assessment before treatment
T1	First physiotherapy session and associated clinical evaluation
T2	Second physiotherapy session and associated clinical evaluation
Follow-up	No further physiotherapy evaluation was performed. The patient died two days after the second session.

The principal repeated outcomes are summarized in Table 2. Muscle strength remained unchanged at grade 2/5 across all assessed regions between the first and second documented sessions. Similarly, bilateral biceps, triceps, and patellar reflexes remained absent. These findings indicate that no observable short-term change in the recorded neuromuscular measures occurred during the two-session observation period.

Table 2. Neuromuscular Outcomes During Physiotherapy Sessions

Outcome	T1	T2
Cervical muscle strength, MMT	2/5	2/5
Shoulder muscle strength, MMT	2/5	2/5
Elbow muscle strength, MMT	2/5	2/5
Wrist muscle strength, MMT	2/5	2/5
Hip muscle strength, MMT	2/5	2/5
Knee muscle strength, MMT	2/5	2/5
Ankle muscle strength, MMT	2/5	2/5
Biceps reflex	Absent bilaterally	Absent bilaterally
Triceps reflex	Absent bilaterally	Absent bilaterally
Patellar reflex	Absent bilaterally	Absent bilaterally

MMT: Manual Muscle Testing.

In contrast to the unchanged neuromuscular findings, all recorded pain measures decreased between the first and second sessions, as shown in Table 3. Resting pain decreased from 2/10 to 1/10. Upper trapezius tenderness decreased from 5/10 to 3/10, thoracic tenderness from 4/10 to 3/10, and movement-related pain from 8/10 to 6/10. The greatest absolute reduction was observed in upper trapezius tenderness and movement-related pain, both of which decreased by two points. These findings describe changes observed during the multimodal physiotherapy period and were not attributed to any individual intervention.

Table 3. Pain Outcomes During Physiotherapy Sessions

Pain Condition	T1	T2
Resting pain, NRS	2/10	1/10
Upper trapezius tenderness, NRS	5/10	3/10
Thoracic tenderness, NRS	4/10	3/10
Movement-related pain, NRS	8/10	6/10

NRS: Numeric Rating Scale.

Respiratory-related outcomes remained unchanged between the two documented sessions. Thoracic expansion was 3 cm at the axillary level and 2 cm at both the mammary and xiphoid levels at T1 and T2. The Modified Borg Dyspnea Scale score also remained 2/10. These findings are presented in Table 4 and indicate no observable change in the recorded respiratory-related measures during the brief observation period.

Table 4. Respiratory-Related Outcomes During Physiotherapy Sessions

Outcome	T1	T2
Thoracic expansion, axillary level	3 cm	3 cm
Thoracic expansion, mammary level	2 cm	2 cm
Thoracic expansion, xiphoid level	2 cm	2 cm
Modified Borg Dyspnea Scale	2/10	2/10

Balance assessment using the Berg Balance Scale (BBS) produced a score of 0 at both documented sessions, indicating a high risk of falling. Functional status assessed using the Barthel Index produced a score of 30, corresponding to severe dependence. The available documentation did not provide a repeated Barthel Index score at T2; therefore, no change in functional dependence across the two sessions was calculated.

The available physiological findings included peripheral oxygen saturation of 99%, respiratory rate of 22 breaths/min, heart rate of 54 beats/min, and blood pressure of 93/57 mmHg. These values were reported descriptively because repeated measurements across the two sessions were not available. Consequently, no temporal comparison or interpretation of change was performed.

Laboratory findings showed substantial electrolyte abnormalities during hospitalization. As presented in Table 5, sodium concentration was 127 mmol/L on March 24, 2026, increased to 145 mmol/L on March 27, and subsequently reached 160 mmol/L on March 28. Potassium concentration was 1.8 mmol/L on March 24 and 2.2 mmol/L on both March 27 and March 28. The available record also documented diarrhea occurring approximately three times per day. However, no formal evaluation establishing the cause of the sodium and potassium abnormalities was available; therefore, these findings are reported descriptively without causal attribution.

Table 5. Available Electrolyte Findings During Hospitalization

Date and Time	Sodium, mmol/L	Reference Range	Potassium, mmol/L	Reference Range
March 24, 2026, 12:56	127	135–145	1.8	3.5–5.0
March 27, 2026, 08:09	145	135–145	2.2	3.5–5.0
March 28, 2026, 14:20	160	135–145	2.2	3.5–5.0

No adverse event was reported during either physiotherapy session. The patient also reported a subjective improvement during the treatment period. After the first session, she reported reduced cervical pain, and during the second session, she described

feeling more comfortable when moving her extremities. These statements represent the patient's subjective experience and are presented descriptively.

Overall, the two-session observation period was characterized by reductions in the recorded pain scores, while muscle strength, deep tendon reflexes, thoracic expansion, perceived dyspnea, and balance scores remained unchanged. The available Barthel Index score indicated severe functional dependence, whereas the physiological and laboratory findings were reported as clinical context rather than evidence of physiotherapy-related change.

Discussion

This case report describes the short-term clinical course of a hospitalized patient with tetraparesis clinically suspected to be associated with Guillain-Barré syndrome (GBS) during two consecutive physiotherapy sessions. The principal observed change was a reduction in pain across resting, palpation, and movement conditions. In contrast, muscle strength remained 2/5 across all assessed regions, biceps, triceps, and patellar reflexes remained absent bilaterally, thoracic expansion and perceived dyspnea did not change, and the Berg Balance Scale score remained 0. The available Barthel Index score of 30 also indicated severe functional dependence. Given the very short observation period, multimodal nature of the intervention, and absence of a comparison condition, these findings should be interpreted as descriptive observations rather than evidence of treatment efficacy.

The reduction in pain was the most apparent change during the documented treatment period. Resting pain decreased by one point, whereas upper trapezius tenderness and movement-related pain each decreased by two points. Several interventions were administered concurrently, including TENS, range of motion exercises, strengthening activities, stretching, soft tissue release, and breathing exercises. Consequently, the observed reduction cannot be attributed to a single intervention. TENS has been described as a non-pharmacological approach for pain modulation and may influence nociceptive processing through peripheral sensory stimulation.^[10] However, this theoretical mechanism should not be interpreted as evidence that TENS alone produced the changes observed in this patient. Changes in pain may also have been influenced by positioning, movement, manual therapy, concurrent medical treatment, symptom fluctuation, or the natural clinical course.

The absence of short-term improvement in muscle strength and deep tendon reflexes is also important when interpreting the findings. All assessed regions remained at grade 2/5, while biceps, triceps, and patellar reflexes remained absent during both documented sessions. Recovery from acute peripheral neurological dysfunction may occur over a longer period than the two-session observation available in this report.⁷ Previous rehabilitation reports have similarly described changes in strength and functional capacity over longer rehabilitation periods.⁵ Therefore, the unchanged neuromuscular outcomes should not be interpreted as evidence that the exercise program was ineffective. Rather, the observation period was insufficient to determine whether subsequent neurological or functional recovery would have occurred.

The patient's balance and functional status further demonstrate the severity of disability during the documented period. The BBS score remained 0 at both sessions, indicating profound balance impairment and a high risk of falling. The Barthel Index score of 30 indicated severe dependence. Because only one Barthel Index score was available, changes in functional independence could not be evaluated over time. These findings also illustrate an important distinction between impairment-level outcomes and activity-level limitations. Muscle strength, reflexes, and pain describe different aspects of the patient's clinical status, whereas the Barthel Index provides information regarding functional dependence. The absence of measurable functional improvement over two sessions cannot be determined because repeated functional assessment was not available.

The respiratory-related outcomes remained unchanged. Thoracic expansion was 3 cm at the axillary level and 2 cm at both the mammary and xiphoid levels during both documented sessions, while the Modified Borg Dyspnea Scale remained 2/10. These results indicate that the recorded respiratory-related measures did not change during the observation period. They should not, however, be interpreted as evidence of stable ventilation, respiratory muscle function, or gas exchange because repeated objective respiratory measurements were not available. A peripheral oxygen saturation of 99% and respiratory rate of 22 breaths/min were documented as available clinical parameters, but the absence of repeated measurements prevents assessment of change over time. Respiratory monitoring remains clinically important in patients with suspected GBS because neurological deterioration may involve respiratory function.^{3,4}

The diagnostic limitations of this case require particular attention. The available clinical findings included symmetrical ascending tetraparesis, normal sensory examination, and bilateral areflexia, with a preceding history of diarrhea. These features were clinically consistent with the working diagnosis documented by the treating neurologist as tetraparesis with suspected GBS. However, cerebrospinal fluid examination, nerve conduction studies, and electromyography were not available, and the formal diagnostic criteria or detailed diagnostic reasoning used by the treating clinician were not documented. No formal differential diagnosis was identified in the available record. Therefore, this report does not establish a definitive diagnosis of GBS and consistently describes the condition as clinically suspected GBS.

The reported hypodense lesion in the pons represents an additional unresolved clinical finding. The available documentation did not explain whether this lesion was considered incidental, related to the patient's neurological presentation, or associated with another pathological process. Accordingly, the lesion cannot be used as evidence supporting the diagnosis of GBS. The coexistence of an unexplained structural imaging finding further reinforces the need for cautious interpretation of the neurological diagnosis. No alternative diagnosis should be proposed retrospectively because the available record does not document sufficient evidence to establish or exclude specific differential diagnoses.

The laboratory findings also require descriptive interpretation. Sodium concentration changed from 127 mmol/L to 145 mmol/L and subsequently to 160 mmol/L, while potassium remained markedly below the laboratory reference range, increasing from 1.8 mmol/L to 2.2 mmol/L. The patient also had a history of diarrhea occurring approximately three times daily. However, no documented investigation established the cause of the electrolyte abnormalities. These findings should therefore not be attributed to dietary intake, diarrhea, or any other single factor. Instead, they provide relevant clinical context because electrolyte abnormalities may coexist with neurological weakness and could potentially influence overall clinical status, but their specific contribution cannot be determined from the available data.¹⁵

The patient's subjective report provided additional descriptive information regarding the treatment period. She reported reduced pain after the first session and greater comfort when moving her extremities during the second session. This subjective improvement was consistent with the observed reduction in recorded pain scores. Nevertheless, patient-reported improvement should not be interpreted as evidence of neurological recovery or treatment efficacy because objective neuromuscular measures remained unchanged and the observation period was extremely limited.

No adverse event was reported during the two documented physiotherapy sessions. This finding is limited to the observed treatment period and does not establish the safety of the intervention package or any individual modality. The patient died two days after the second physiotherapy session, and no further physiotherapy evaluation was performed. The available record did not identify the cause of death or establish any relationship between physiotherapy and this outcome. Therefore, no causal inference regarding the patient's death can be made.

This case has several limitations. First, diagnostic certainty was limited by the absence of CSF analysis, NCS, EMG, documented diagnostic criteria, and a documented differential diagnosis. Second, the clinical significance of the pontine lesion remained unclear. Third, the observation period consisted of only two physiotherapy sessions, preventing assessment of medium- or long-term recovery. Fourth, multiple interventions were delivered concurrently, making attribution of clinical changes to individual modalities impossible. Fifth, although repeated impairment-level outcomes were available, repeated functional assessment and standardized repeated physiological monitoring were limited. Finally, the absence of post-treatment follow-up restricted interpretation of the subsequent clinical trajectory.

Despite these limitations, the report provides detailed documentation of intervention parameters and repeated clinical observations during an early inpatient period. The findings emphasize the importance of distinguishing observed clinical change from treatment efficacy, particularly when multimodal rehabilitation is delivered over a short period. Future case reports should incorporate complete diagnostic documentation, clearer neurological and respiratory monitoring, repeated functional outcomes, detailed intervention reporting, and longitudinal follow-up.¹ These elements would improve reproducibility and allow a more reliable interpretation of recovery during physiotherapy management in patients with acute neurological conditions.

Conclusion

This case report describes the short-term clinical observations during two consecutive physiotherapy sessions in a 24-year-old woman with tetraparesis clinically suspected to be associated with Guillain–Barré syndrome. During the documented treatment period, resting pain, upper trapezius tenderness, thoracic tenderness, and movement-related pain decreased. In contrast, muscle strength remained at grade 2/5, biceps, triceps, and patellar reflexes remained absent bilaterally, thoracic expansion and perceived dyspnea were unchanged, and the Berg Balance Scale score remained 0. The available Barthel Index score of 30 indicated severe functional dependence.

These findings represent observations during a brief period of multimodal physiotherapy involving TENS, range of motion exercises, strengthening, bridging, breathing exercises, stretching, and soft tissue release. Because multiple interventions were administered concurrently, the observation period was limited to two sessions, and no comparison condition was available, the observed changes cannot establish treatment efficacy or be attributed to any individual intervention. Similarly, the absence of reported adverse events during the documented sessions does not establish the general safety of the intervention program.

Interpretation is further limited by incomplete diagnostic confirmation, the absence of CSF analysis, NCS, and EMG, the lack of documented differential diagnostic reasoning, and the unresolved clinical significance of the pontine lesion. No further physiotherapy follow-up was available, and the patient died two days after the second session without a documented causal relationship to physiotherapy.

This case highlights the importance of comprehensive diagnostic documentation, reproducible intervention protocols, repeated functional and physiological assessments, and longer follow-up when reporting physiotherapy management in acute neurological conditions.

Author Contribution

Meliani Fransiskus: Conceptualization, Investigation, Data Curation, Methodology, Formal Analysis, Writing Original Draft, Visualization.

Meutiah Mutmainnah Abdullah: Conceptualization, Methodology, Validation, Supervision, Writing Review and Editing.

Sri Wahyuni N.: Investigation, Resources, Validation, Clinical Data Acquisition, Writing Review and Editing.

All authors contributed to the interpretation of the case, reviewed the final manuscript, and approved the submitted version.

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Conflict of Interest Statement

The authors declare that they have no conflicts of interest related to the preparation, conduct, or publication of this case report.

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Ethics Statement

Formal ethical approval was not obtained for this case report because the report documented clinical care provided to a single patient and did not involve an experimental intervention. Permission to involve the patient and collect relevant clinical data was obtained from the clinical supervisor at the practice site. Informed consent for the use of relevant clinical information for the preparation and publication of this case report was obtained verbally from the patient. The consent also covered the use of clinical data and visual materials, where applicable. All reported information was anonymized to protect patient privacy and confidentiality.

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