

## CASE DESCRIPTION

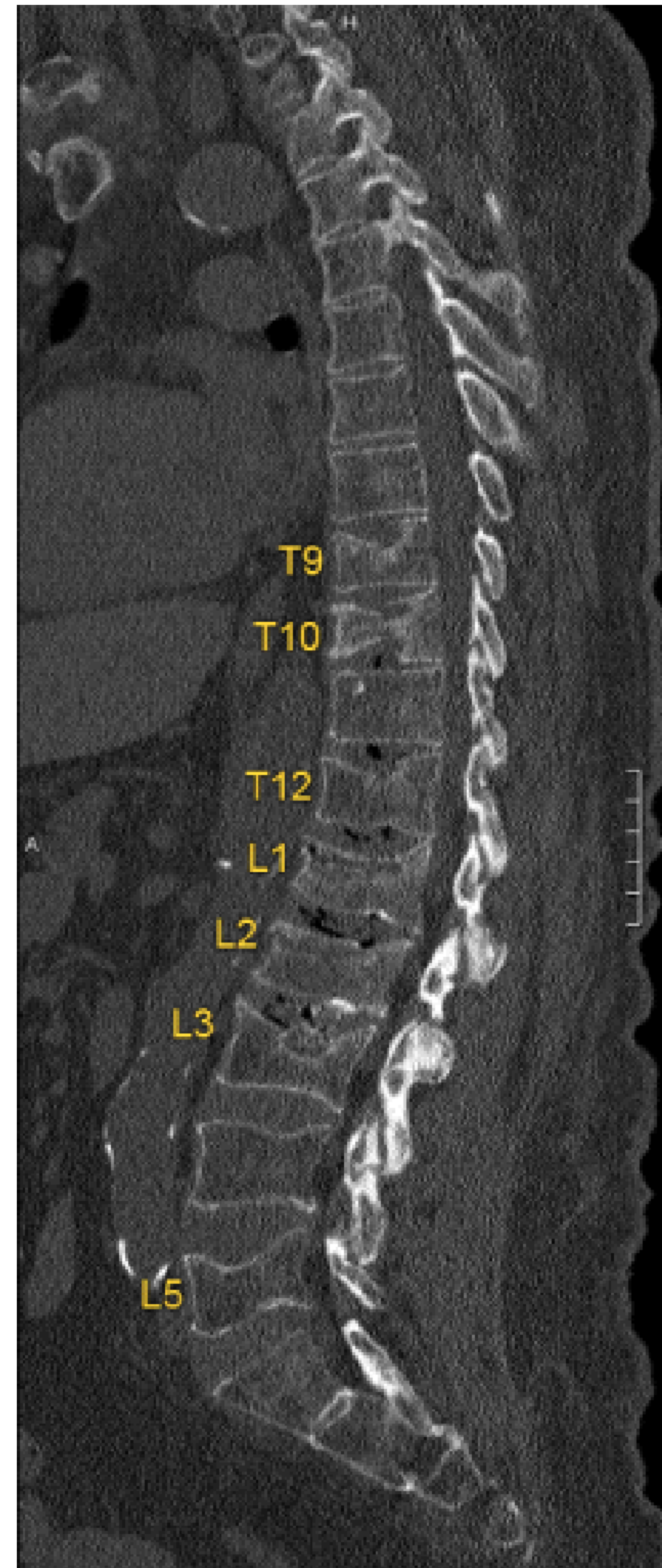
A 65-year-old male with chronic incomplete C5 tetraplegia from a motor vehicle collision presented to the emergency room after several days of not feeling well. Additional relevant history included recent suprapubic catheter exchange, multiple UTIs, and three vertebral compression fractures. In the emergency department, he had elevated blood pressure of 210/170 and muscle spasms. The patient did not have a prior history of autonomic dysreflexia, and a cause was not identified. The patient received oral baclofen and Ativan to treat his muscle spasms. After discharge, he followed up in the outpatient clinic and noted to have increased spasm and severe back pain.

## ASSESSMENT/RESULTS

A routine CT scan was done as an outpatient, which showed decreased osseous mineralization and compression fractures of T9, T10, T12, L1, L2, L3, and L5. An orthopedic surgeon evaluated the patient and recommended no surgical intervention at this time.

## DISCUSSION

Osteoporosis is a known complication resulting from a spinal cord injury (SCI). Many factors affect the risk of osteoporosis, such as the degree of the injury, muscle spasticity, age, sex, and duration after injury. Bone demineralization is most common in long bones below the level of injury.



**Figure 1:** Non-contrast CT of the spine demonstrated vertebral body fractures at T9, T10, T12, L1, L2, L3 and L5.

## DISCUSSION (Continued)

This process rarely affects the spine. The pathogenesis is complex and not entirely understood, but the disuse of the affected area may play a role. Patients with SCI appear to demonstrate alterations in bone remodeling with a predominance of bone resorption versus formation. Pharmacologic prophylaxis includes bisphosphonates, teriparatide, romosozumab, and denosumab. Rehabilitation, including functional exercises, should be included for prevention in these patients.

## CONCLUSION

Vertebral fractures should be considered in patients with spinal cord injuries with back pain and autonomic dysreflexia. Prevention and screening are an essential part of the rehabilitation course following spinal cord injuries.

## REFERENCES

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