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# Diabetic neuropathic foot without neuropathy: Could it be cancer? - a case report

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## CASE DIAGNOSIS

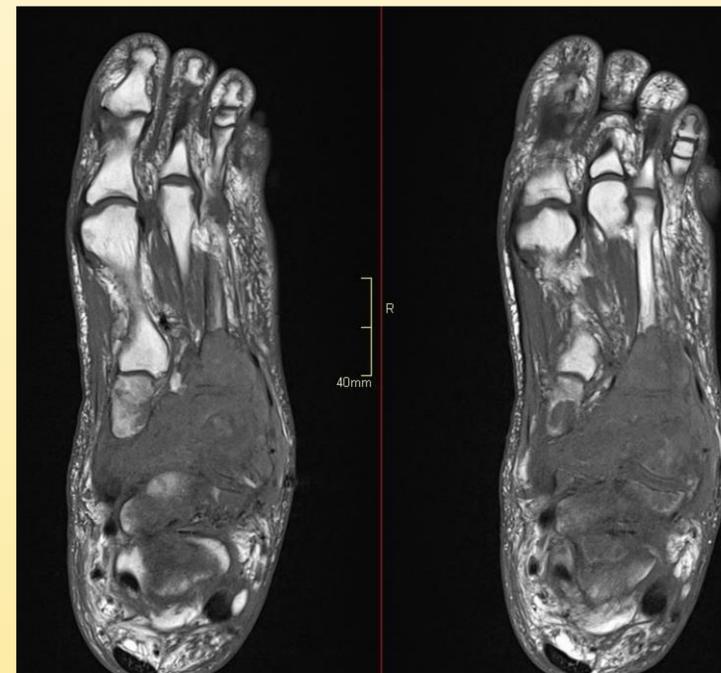
We present a case of a 64 year-old diabetic male who presented with months of progressively worsening foot pain and swelling, who was initially diagnosed with Charcot joint disease.(CJD) He was ultimately found to have a very rare tumor.



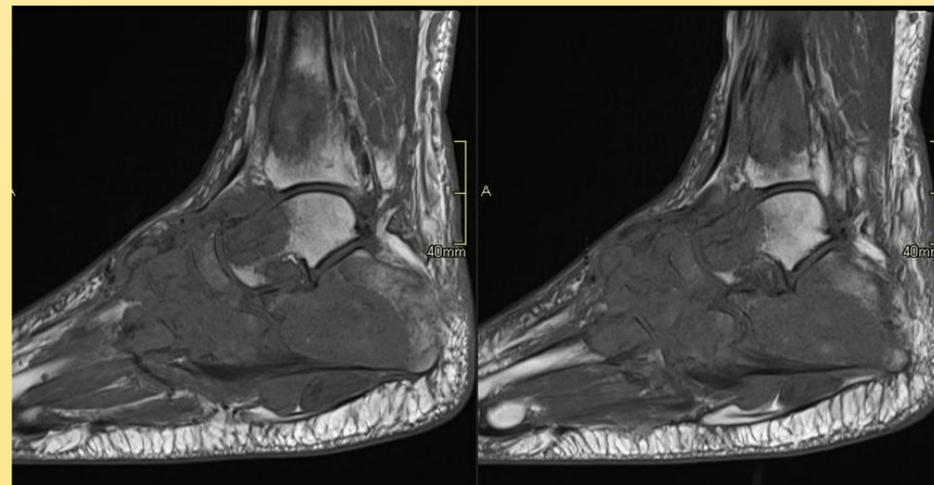
Radiograph months after onset. The chronic phase of CJD is said to occur when temperature and swelling decrease.

## RESULTS

A surgical incisional biopsy revealed a rare type of soft-tissue sarcoma – sclerosing epithelioid fibrosarcoma. Staging CT scans demonstrated multiple bilateral pulmonary nodules. He was given a diagnosis of stage IV sarcoma. Given the extent of disease, amputation was the only surgical option. Since pulmonary nodules were present, amputation would not be curative. He chose treatment with systemic chemotherapy. He had cardiotoxicity to doxorubicin and chemotherapy regimen was changed. Disease remains stable on scans, and he remains ambulatory.



Initial Axial T1 MRI images



Initial sagittal T1 MRI images (right)

## DISCUSSION

This case highlights the importance of careful history and physical examination when formulating a differential diagnosis. The patient was given a diagnosis of CJD despite not having a classic presentation, such as history of nerve trauma or painless foot swelling.

Other disorders associated with CJD include tertiary syphilis (large joints of lower limb), syringomyelia ( joints of upper limb), alcoholism, leprosy, pernicious anemia, Charcot-Marie Tooth, and poliomyelitis. None of these were present in this patient. Electrodiagnostic studies were not done.

Although CJD is not always painless, pathogenesis is related to joint denervation so it is not typical to have increasing joint pain. Temperature and swelling should decrease as the disorder progresses, but this patient got worse. Both CJD and cancer may cause similar cortical destruction of bone and bone scan can be positive in both disorders. MRI can distinguish between CJD and tumor because CJD will typically have low signal on T1 and T2 images and tumor will typically have low signal on T1 and high signal on T2. Cancer was not considered initially despite significant weight loss in this patient.

## CONCLUSION

The hallmark feature of Charcot joint disease, history of neuropathy, was not present. Although HgA1c was very high and ESR was not elevated, pathology was cancer and not diabetes-related. Further work-up must occur when symptoms persist with treatment, especially in medically complex patients.

## References

- Knight D, Gray HW, McKillop JH, Bessent RG. Imaging for infection: caution required with the Charcot joint. *European journal of nuclear medicine.* 1988 Jan 1;13(10):523-6.
- Lee L, Blume PA, Sumpio B. Charcot joint disease in diabetes mellitus. *Annals of vascular surgery.* 2003 Oct 1;17(5):571-80.

## CASE DESCRIPTION

He presented with 10 months of worsening atraumatic left foot pain, swelling, and unintentional weight loss of 23 pounds. He was initially diagnosed with CJD.

Although he was compliant with the Charcot Restraint Orthotic Walker (CROW) therapy, his symptoms did not improve. He had new radiographs months after the initial diagnosis (above), which showed a destructive appearing process. The differential diagnosis then included: septic arthritis, gout, cellulitis, idiopathic inflammatory disease, osteomyelitis, and neoplasm. Laboratory data revealed a HgA1c of 11.2, ESR of 18, and normal creatinine and white blood cell counts.

Advanced imaging studies were performed. A CT guided needle biopsy was inconclusive.