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- Ed. 2, pp. 809-876. New York, Churchill Livingstone, 1977.
6. TALBOTT, J. H., and YU, T.-F.: Clinical Experience in the Management of Gout. *In Gout and Uric Acid Metabolism*, pp. 240-257. New York, Stratton Intercontinental Medical Book, 1976.
 7. WRIGHT, J. T.: Unusual Manifestations of Gout. *Australasian Radiol.*, **10**: 365-374, 1966.
 8. WYNGAARDEN, J. B., and HOLMES, E. W.: Clinical Gout and the Pathogenesis of Hyperuricemia. *In Arthritis and Allied Conditions: A Textbook of Rheumatology*, edited by D. J. McCarthy, Ed. 9, pp. 1193-1228. Philadelphia, Lea and Febiger, 1979.
 9. WYNGAARDEN, J. B., and KELLEY, W. N.: Some Unusual Presentations of Gout. *In Gout and Hyperuricemia*, pp. 253-257. New York, Grune and Stratton, 1976.
 10. YU, T.-F.: Secondary Gout Associated with Myeloproliferative Diseases. *Arthrit. and Rheumat.*, **8**: 765-771, 1965.

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Association of Sciatica-Like Pain and Addison's Disease

A CASE REPORT

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Primary adrenocortical insufficiency, or Addison's disease, is a well described clinical entity. Among the most frequent signs and symptoms are weakness, hyperpigmentation of the skin and mucous membranes, weight loss, gastrointestinal complaints, and hypotension^{3,5}. Musculoskeletal symptoms usually are not prominent, but migratory myalgias have been reported¹. Back pain and sciatica have not been previously reported as presenting complaints. Reported here is such a case with a pertinent family history.

Case Report

A sixteen-year-old white girl was referred to the Pediatric Orthopaedic Unit at the Massachusetts General Hospital for evaluation of a sharp pain of several months' duration which had started in the low back and radiated into the left thigh but not the calf. The discomfort was exacerbated by exertion and sitting and was relieved by rest in the recumbent position. There were no sensory, muscular, or bowel and bladder changes. The patient did have a two-year history of pigmentation of the tongue, which had been extensively evaluated but had not been diagnosed (Fig. 1). Easy fatigability was not volunteered by the patient but was elicited by further questioning.

On physical examination, this asthenic girl was in no acute distress. The blood pressure was 85/50 millimeters of mercury when she was supine and 80/60 millimeters of mercury when she was upright. The thyroid was symmetrically enlarged but without nodularity. The superior aspect of the tongue had irregular regions of dark pigmentation. These regions were not raised but contrasted markedly with adjacent regions of normal color. The volar creases overlying the joints of the hand also revealed hyperpigmentation. Straight-leg-raising on the left side was limited to 20 degrees by pain in the low back and in the posterior aspect of the left thigh. Straight-leg-raising on the right was limited to 45 degrees but was not painful. The quadriceps, extensor hallucis longus, and gastrocnemius-soleus muscles were all graded as normal on examination.

Several radiographs of the spine were made. Standing anteroposterior and lateral radiographs revealed a 10-degree curve, convex to the left, from the seventh to the tenth thoracic vertebra and a 13-degree curve, convex to the right, from the tenth thoracic to the fourth lumbar vertebra.

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There was a 1+ rotational component in both curves. Coned-down radiographs at the lumbosacral junction, including lateral and oblique radiographs, did not reveal any spondylolysis or spondylolisthesis. A bone scan performed with technetium diphosphonate was normal. A diagnosis of Hashimoto's thyroiditis was made on endocrine evaluation. The thyroxine level was slightly low, at 3.7 micrograms per deciliter (normal,

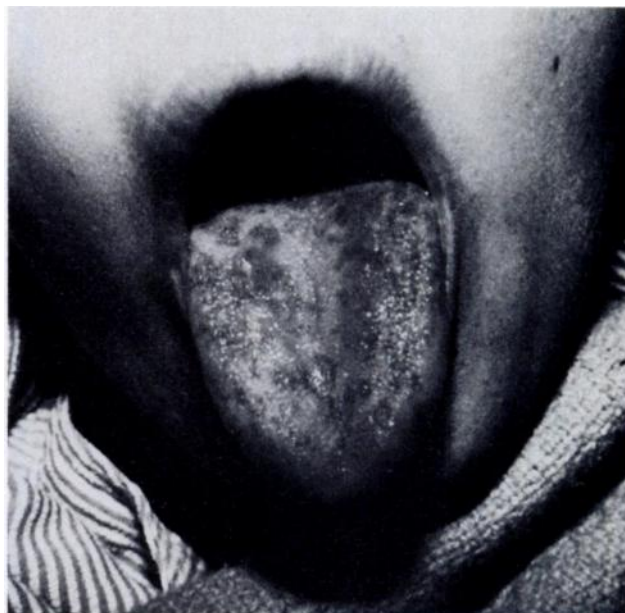


FIG. 1

Pigmentation of the tongue at the time of initial evaluation of this patient.

four to twelve micrograms per deciliter), and the level of thyroid-stimulating hormone was markedly elevated at 77.7 microunits per milliliter (normal, 5.0 to 3.5 microunits per milliliter). The additional diagnosis of Addison's disease was confirmed by a low morning serum cortisol level of 0.6 microgram per deciliter (normal, five to twenty-five micrograms per deciliter), a low twenty-four-hour urinary 17-hydroxysteroid level of 0.01 milligram (normal, three to eight milligrams), and a low 17-ketosteroid

level of 0.6 milligram (normal, four to sixteen milligrams). An adrenocorticotropic stimulation test failed to initiate a rise in secretion of adrenal steroid.

We thought that the patient had both autoimmune adrenal and thyroid disease². Appropriate steroid and thyroxine replacement was started and the systemic symptoms soon resolved. The back and thigh discomfort resolved completely. Six weeks after the initiation of steroid replacement, straight-leg-raising was possible to 80 degrees bilaterally.

When the diagnosis of Addison's disease was made known to the family, they recalled that, approximately twenty-five years prior to the patient's illness, a maternal aunt had been hospitalized with weakness and apparent sciatica. A diagnosis of Addison's disease had been made, and all of her signs and symptoms had resolved with steroid replacement. The aunt remained symptom-free on steroid replacement.

Our patient had a period following resolution of the symptoms when she failed to take the steroid replacement. The "sciatica" in the left lower extremity recurred within a week, but resolved promptly when steroid replacement was resumed.

Discussion

The manner of presentation of an illness can influence the ease with which a diagnosis is established. Had this patient been seen initially on an endocrine service, the diagnosis of Addison's disease would most probably have been made promptly. However, the patient was admitted to the Pediatric Orthopaedic Unit complaining of back and

thigh pain. While she was cooperative she was also reticent, and some of the associated facts only became evident over the course of evaluation.

With a diagnosis of Addison's disease established, the question of the cause of the apparent sciatica still remained. Because of the lack of focal findings on neurological examination, we decided to observe her response to steroid administration rather than proceed with invasive testing. Fortunately the sciatic symptoms resolved quite rapidly following steroid replacement. A previous report of the musculoskeletal manifestations of Addison's disease did describe stiffness and myalgias as presenting complaints¹. Cartilage stiffness, especially of auricular cartilage, has also been reported⁴. Perhaps such sources of stiffness were the cause of this patient's low-back and thigh discomfort with limited straight-leg-raising.

While certainly not common, the association between sciatica-like pain and Addison's disease should be borne in mind when concomitant signs and symptoms point to the presence of an underlying systemic illness. The pathogenetic mechanism linking sciatica-like pain and adrenal insufficiency in this patient, however, remains a matter for conjecture.

References

1. CALABRESE, L. H., and WHITE, C. S.: Musculoskeletal Manifestations of Addison's Disease. *Arthritis and Rheumatism*, **22**: 558, 1979.
2. FABER, JENS; COHN, DORTE; KIRKEGAARD, CARSTEN; CHRISTY, MORTEN; SIERSBOECK-NIELSEN, KAJ; FRIIS, THORKILD; and NERUP, JØRN: Subclinical Hypothyroidism in Addison's Disease. *Acta Endocrinol.*, **91**: 674-679, 1979.
3. LITTLE, G. W.: The Adrenals. *In Textbook of Endocrinology*, edited by R. H. Williams. Ed. 6, pp. 281-284. Philadelphia, W. B. Saunders, 1981.
4. NELSON, D. H.: Diagnosis and Treatment of Addison's Disease. *In Endocrinology*, pp. 1193-1201. Edited by L. J. DeGroot, G. F. Cahill, Jr., W. D. Odell, Luciano Martini, J. T. Potts, Jr., D. H. Nelson, Emil Steinberger, and A. I. Winegrad. New York, Grune and Stratton, 1979.
5. PARKER, FRANK: Skin and Hormones. *In Textbook of Endocrinology*, edited by R. H. Williams. Ed. 6, pp. 1080-1098. Philadelphia, W. B. Saunders, 1981.