Received: 16 February 2020 | Revised: 8 March 2020 | Accepted: 24 March 2020

DOI: 10.1002/ccr3.2875

CLINICAL IMAGE

Clinical Case Reports Open Access WILEY

Chronic lymphocytic leukemia, a rare cause of pituitary stalk thickening

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Abstract

This case highlights a rare presentation of chronic lymphocytic leukemia (CLL). CNS involvement by CLL is rare, and only 5 cases with pituitary or hypothalamic involvement have previously been reported. Unfamiliarity with this disease complication may lead to a delay in diagnosis and treatment.This case highlights a rare presentation of chronic lymphocytic leukemia (CLL). CNS involvement by CLL is rare, and only 5 cases with pituitary or hypothalamic involvement have previously been reported. Unfamiliarity with this disease complication may lead to a delay in diagnosis and treatment.

KEYWORDS

CLL, diabetes insipidus, pituitary stalk

1 | CASE

A 60-year-old man with stage 0 CLL was referred with diabetes insipidus (DI), mild hyperprolactinemia, and severe central hypogonadism. Magnetic resonance imaging demonstrated mild pituitary gland enlargement and a subtly prominent infundibulum (Figure 1A).

Levels of serum IgG4, alpha-fetoprotein, human chorionic gonadotropin, angiotensin-converting enzyme plus, and antineutrophil cytoplasmic antibodies were unrevealing. His white blood cell count had increased from 11 600 to 32 830 per microliter over 6 months. Computed tomography scans showed new diffuse multilevel lymphadenopathy.

Lumbar puncture revealed a normal glucose and elevated protein level. Tube 4 showed 3 RBC and 72 WBC per microliter. Flow cytometry showed a CD19/20/5-positive and CD10-negative B-cell population with monotypic kappa light chain staining, consistent with his diagnosis of CLL.

Due to the rarity of pituitary involvement by CLL,[1,2] the patient's outside hematologist was initially reluctant to consider treatment and favored an alternative diagnosis of primary autoimmune hypophysitis. Imaging 5 months later demonstrated radiographic progression (Figure 1B), and therapy with ibrutinib was chosen given its good CNS penetrance. DI symptoms improved after several days, and oral desmopressin was weaned from 0.3 mg twice daily to 0.1 mg every evening. Serial imaging 3 months (Figure 1C) and 1 year (Figure 1D) later showed a complete radiographic response. His WBC normalized, and lymphadenopathy resolved. Serum prolactin remained minimally elevated, and he continues testosterone replacement.

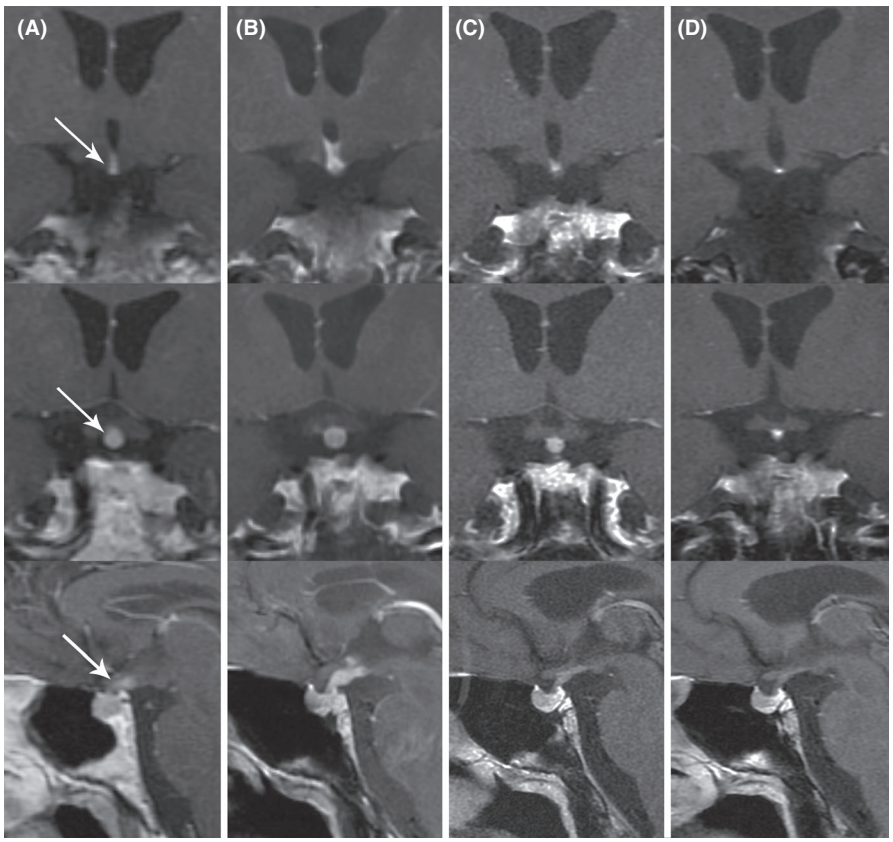

FIGURE 1 Magnetic resonance imaging of the pituitary gland. Postcontrast T1-weighted coronal and sagittal images at presentation (A), 5 mo later (B), and 3 mo (C), and 1 y (D) after ongoing treatment with ibrutinib was initiated

CONFLICT OF INTEREST

None.

AUTHOR CONTRIBUTIONS

Alexander Faje served as author.

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How to cite this article: Faje A. Chronic lymphocytic leukemia, a rare cause of pituitary stalk thickening. *Clin Case Rep*. 2020;8:1319–1320. https://doi.org/10.1002/ccr3.2875