

POSTER TITLE

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INTRODUCTION

Thyroid atrophy is often seen after sunitinib treatment. This has been linked to sunitinib-induced degeneration of thyroid follicular cells. However, the impact of imatinib mesylate (IM), which has a similar pharmacological profile to sunitinib, on thyroid volume has not been studied. Notably, IM remains the mainstay of treatment for Nigerian patients with chronic myeloid leukaemia (CML).

AIM

This study aimed to assess the effect of continuous IM use on thyroid volume in BCR::ABL1-positive CML patients.

METHOD

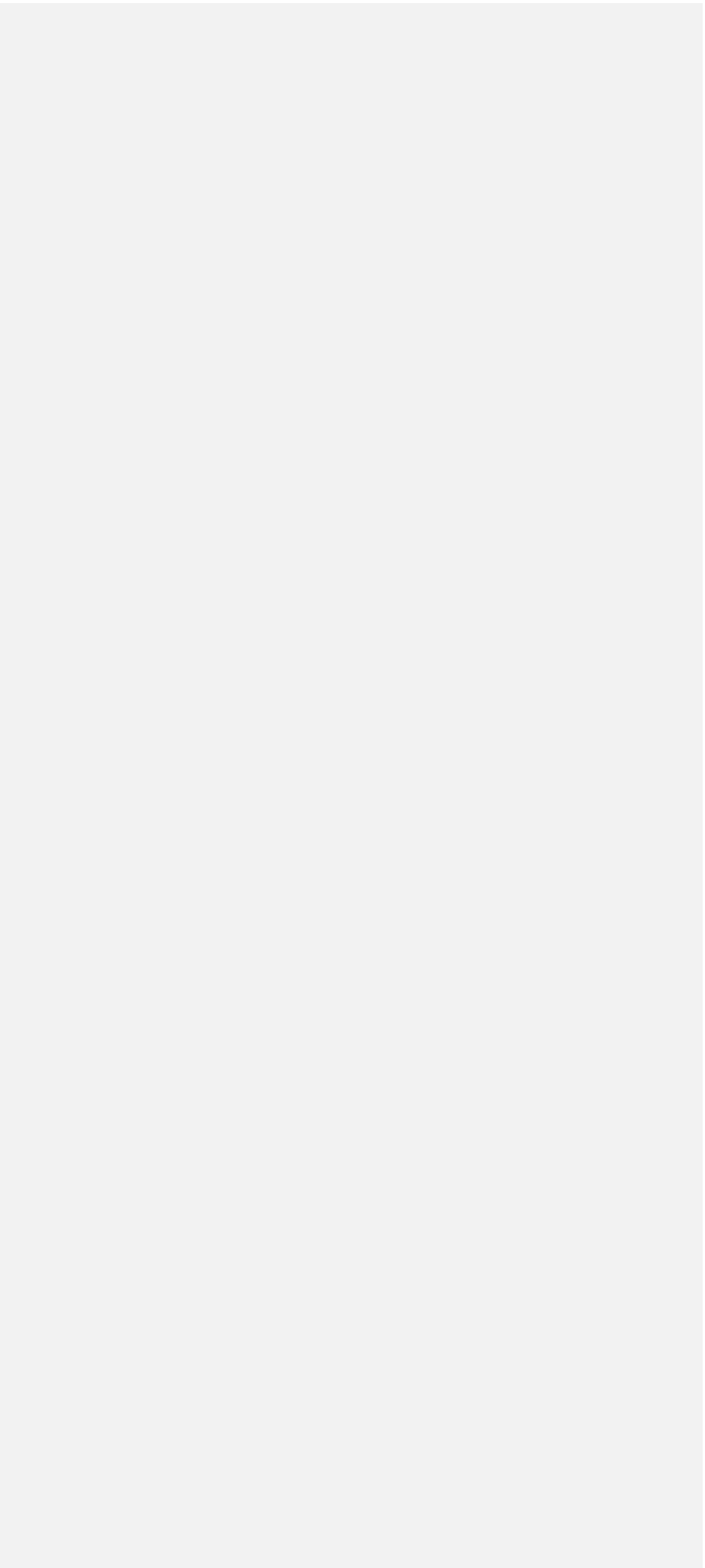
This longitudinal, case-controlled study involved 50 IM-naïve patients with BCR::ABL1-positive CML and 50 age- and sex-matched healthy controls. Subjects with an underlying thyroid disorder or any thyroid medication were excluded. The diagnosis of CML was confirmed by quantifying BCR::ABL1 transcripts using Reverse Transcriptase Quantitative PCR (RT-qPCR-TaqMan Chemistry), and transcript variants were identified with the Seeplex Leukaemia BCR::ABL1 transcript kit (Seegene, Seoul, Korea). Thyroid ultrasonography was performed on all participants upon recruitment and again after six months of treatment with IM for the CML patients, using a LOGIQ P9 ultrasound machine (GE Healthcare, Philippines). Total thyroid volume (TTV) was calculated from the measured thyroid parameters. A Wilson Signed Rank test was used to investigate changes in the thyroid parameters in the CML patients.

CONCLUSIONS

This study shows that long-term imatinib use is associated with a significant reduction in TTV exclusively in male CML patients. Therefore, serial volumetric analysis of the thyroid gland and thyroid function tests in CML patients on IM might be desirable.

RESULTS

The median age (range) in years of the two groups (CML patients versus controls) was 40.0 (18–65) versus 38.5 (18–63) (p=0.251). Twenty-three (46%) of the CML patients and 21 (42%) of the controls were males. The TTV did not differ significantly between the patients and the controls at recruitment. The median (range) TTV of the CML patients at baseline compared to 6 months was 7.6 (3.3-27.7) mL versus 7.8 (3.4–22.8) mL (p = 0.660). Sub-analysis showed a significant reduction in the median TTV at 6 months only in male CML patients, i.e., baseline versus 6 months [8.4 (3.26–19.81) versus 7.3 (2.40–14.53)] (p=0.021).



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