

INTRODUCTION

Recent studies show that the phase angle measured with a bioimpedance analyzer (BIA) may be related to the patient's frailty, partly independent of the disease and current condition(1). In some cases, to mortality and the appearance of osteosarcopenia. In IBD, it may also be related to reduced muscle mass(2).

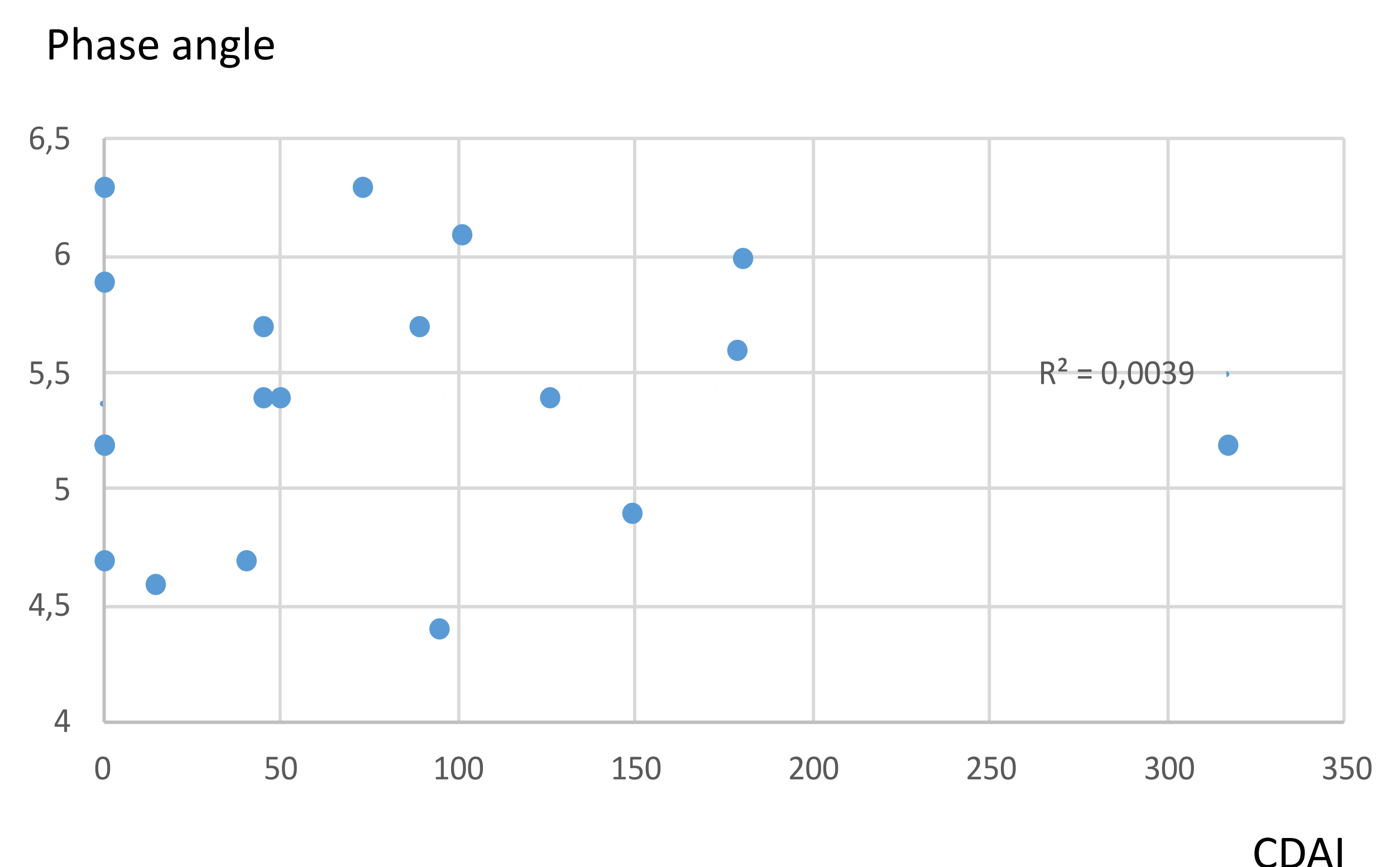
MATERIALS AND METHODS

In our present study, we examined inflammatory bowel disease (IBD) patients undergoing biological therapy and compared the phase angle with disease activity scores: in Crohn's disease, with the Crohn's Disease Activity Index (CDAI) and the Perianal Disease Activity Index (PDAI), and in ulcerative colitis, with the Mayo score. Of the 33 IBD patients receiving biological therapy, 24 had Crohn's disease, and 9 had ulcerative colitis. In ulcerative colitis, the Mayo score showed no correlation with the phase angle value.

RESULTS

In Crohn's disease, we identified five patients with exceptionally low phase angles compared to others. The patient with the lowest phase angle was 4.4; the patient had a stoma, had been on biological therapy for 8 years, and was on steroids at the time of the measurement. Her body composition was suggestive of sarcopenia, with a high body fat percentage (33%), and a BMI of 19.9. A patient diagnosed 32 years ago with a phase angle of 4.6 was also on biological therapy, had not received steroids, and had a history of surgery; her body composition was ideal (BMI 23.5, normal muscle and fat mass). Two patients had a phase angle of 4.7: one was a Crohn's patient diagnosed 14 years ago, had been on steroid and biological therapy at the time of the measurement, had an ideal BMI (20.2), adequate skeletal muscle mass, but reduced body fat percentage; another was also diagnosed 14 years ago, did not receive steroid treatment, had undergone one surgery, had a BMI of 27.4, normal muscle mass, and increased body fat percentage (33.3%). The fifth patient, with a phase angle of 4.9, was diagnosed with Crohn's disease 7 years ago, did not receive steroids at the time of measurement, had not undergone surgery, had slightly reduced muscle mass and increased body fat percentage (29.1%), and had a BMI of 20.5. It is noteworthy that the five Crohn's patients with the lowest phase angle were all women.

Connection between CDAI and Phase angle



CONCLUSION

No clear correlation between disease activity and phase angle was demonstrated in the present patient material. One possible explanation is that the general condition of the examined patients had not deteriorated to the extent that it was reflected in a significant decrease in phase angle. On the other hand, it cannot be ruled out that, in IBD, disease activity alone is not the sole determining factor in the development of the phase angle; rather, it is influenced by body composition, loss of muscle mass, and overall nutritional and functional status.