VITAMIN D LEVEL: TO TEST OR NOT TO TEST?

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BACKGROUND
• 10% of the US population has severe vitamin D deficiency, with highest prevalence in African Americans.1
• Vitamin D deficiency is significantly higher among the urban-living population, obese patients, and in the Midwest.2
• Multiple studies suggest that vitamin D deficiency may contribute to the pathophysiology of many diseases including cardiovascular disease, depression, and cancer.3,4
• There are limited guidelines regarding the frequency and indications for vitamin D level testing.

RESULTS
• Of the patient cohort (n=3,976), only 17.56% had vitamin D levels tested and 12% had a prior diagnosis of vitamin D deficiency. Of those tested, 68% were females, 72% were African Americans, with an average age of 59 years.
• Women, patients with a history of bone fracture, alcohol use disorder, celiac disease, and chronic kidney disease (CKD) were more frequently tested (Table 1).
• Although most patients tested had vitamin D deficiency (71%), our study did not show significance between low vitamin D levels and medical conditions known to cause vitamin D deficiency (table 2).
• Of those with vitamin D deficiency who were re-tested, 52% had an increase in their vitamin D levels, and 40% of them became vitamin D sufficient.

METHODS
• The study population includes all adult patients (≥18 years old) who attended the clinic from January 2018 to December 2018.
• Retrospective analysis included: demographic information, past medical history consisting of various comorbidities
• Vitamin D levels ≥ 30ng/ml were considered normal, while levels < 30ng/ml were considered deficient.
• Basic descriptive statistics were used to describe the population, while Chi square tests and t-tests were used as appropriate to compare groups.

CONCLUSIONS
• Although African Americans are generally known to have lower levels of vitamin D when compared to other races, we found they were not more likely to be tested, or to have vitamin D deficiency.
• This retrospective study did not show significance between common medical problems associated with the low vitamin D levels and vitamin D deficiency.
• The majority of patients who had a repeat follow-up with vitamin D test had an improvement in their level.

RECOMMENDATION
• The decision to test for vitamin D level should remain individualized.

REFERENCES

Table 1: Demographics, and comorbidities of ASMC IM clinic patients

Table 2: Comparison of vitamin D deficiency amongst various subgroups