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**Impact of COVID lockdown: Increased prevalence of symptomatic Vitamin D deficiency in adolescents**

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**Abstract**

**Background:**During the COVID lockdown in India, which lasted for more than a year, all schools were closed and children were homebound. When the lockdown was lifted, we observed an increased prevalence of Vitamin D deficiency(VDD) in adolescents. We want to highlight the effect of home lockdown on adolescents, which can predispose such children to VDD.

**Aim:**To document the increased prevalence of symptomatic VDD in adolescents after COVID lockdown and to study the symptoms, biochemical abnormalities, and response to therapy in this subset.

**Methods:**This prospective observational study was done from November 2021 to May 2022 with a minimum follow-up of six months.

**Inclusions:**Consecutive children presenting with gait abnormalities, proximal myopathy, and pains, with documented VDD. Exclusion: Genetic, neuromuscular disorders, juvenile rheumatoid arthritis, chronic renal failure, thyroid disorders and those on anti-epileptic medications and vitamin D supplementation in the past 6 months were excluded from the study. We recorded the symptomatology, biochemical abnormalities, and muscle weakness and followed their improvement after Vitamin D and Calcium supplementation.

**Results:**A statistically significant increase in symptomatic VDD in adolescents, in six months post-lockdown was noted. Thirty-one adolescents between 9 to 14 years were studied. All cases were relieved of pain and muscle power normalized in 12 weeks.

**Conclusion:**Prolonged house arrest may cause VDD in adolescents. Physicians should consider VDD in adolescents with myopathy and pain after pandemic lockdowns. Supplementation of Vitamin D and calcium resolves most symptoms except deformities. Follow-up is needed until growth spurt completion for recurrence of symptoms.

**Keywords:**Adolescents; COVID impact; Deficiency; Proximal myopathy; Vitamin D.

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