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VITAMIN D DEFICIENCY AND CENTRAL PRECOCIOUS PUBERTY (CPP) IN CHILDREN WITH AUTISM SPECTRUM DISORDER (ASD) - A CASE SERIES

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INTRODUCTION

More children with Autism Spectrum Disorder (ASD) are being recognised. Management of ASD remains challenging. We report 2 children with ASD manifesting with Vitamin D deficiency and 5 children with ASD and central precocious puberty (CPP). DSM-5 classification is used to describe the autism severity.

CASES

Two patients presented with symptomatic hypocalcaemia. Patient A (13 years old; severe ASD level 3) had carpopedal spasms and Patient B (3 years old; ASD level 3) had rickets. Both had restricted diet variations and were stunted (height SDS -2.07 and -2.9 respectively). Patient A had serum calcium of 1.61mmol/L, ALP of 799U/L, iPTH of 25.2 pmol/L, and Vitamin D of 18 nmol/L. Patient B had serum calcium of 1.66 mmol/L, ALP of 2333 U/L, iPTH of 42.2 pmol/L, and Vitamin D of 11 nmol/L. Both required intravenous calcium gluconate, oral calcium carbonate, cholecalciferol, and calcitriol. Both their serum calcium levels normalized with treatment. Five patients were referred for CPP. Patients C (8 years old; ASD level 1) and D (7.2 years old; ASD level 3) were siblings who presented with isolated thelarche. Patient E (5.6 years old; ASD level 1) had thelarche and menarche. Patient F (7 years old; ASD level 1) presented with tall stature and thelarche. Patient G (8.5 years old; ASD level 3) presented with advanced puberty. Three of the five children with CPP had abnormal psychological traits (genitalia rubbing). At presentation, breast staging varies between Tanner 2-4, and pubic hair at Tanner 2-3. The mean basal LH level was 0.8 ± 0.8 IU/L, mean FSH was 5.8 ± 2.87 IU/L, and mean estradiol was 179 ± 128.2 pmol/L. Bone ages were advanced ranging from 0.6 to 3 years and ultrasonography of the pelvis revealed pubertal uterine development. Three required LHRH tests to confirm the diagnosis. All were treated with GnRH agonists. Only 1 patient completed treatment.

CONCLUSION

Early recognition and therapy may benefit these children.