Hypokalemic Periodic Paralysis in Pregnancy

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Hypokalemic Periodic Paralysis (HPP) has not been reported in pregnancy. A case of HPP occurring twice during the first 28 weeks of gestation is reported.

A 24 year old Hindu G2 P1 A0 L1 with 26 weeks gestation was admitted on 08/05/96 with weakness of Rt. Arm, diarrhoea (3-4 times/day) and pain in abdomen since 1 day. First pregnancy had been uneventful with FTND of 1.5 kg female child (alive and well) 4 years ago. There was no relevant family history. During the current pregnancy she had an acute attack of quadriparesis with loss of head control at 7 weeks gestation and was admitted in a local hospital. At that time weakness was more in upper limbs than in lower limbs, more in proximal muscles than distal muscles. Deep Tendon Reflexes (DTR) brisk in both upper limbs and sluggish in both lower limbs. She recovered spontaneously and rapidly in 2 days without any specific diagnosis or treatment. Investigations at that time showed normal skull and spine X rays, normal RBS and Renal functions. S. Electrolytes were not done.

On admission at our hospital she had generalized weakness with bodyache, poor nutrition, Ht 150 cm, Wt. 39 Kg. CNS higher functions and cranial nerves normal. DTR normal, Plantars flexor. Power in Rt. Arm 3/5, rest of the limbs 4/5. Pallor mild, BP 100/70, Pulse 90, min, regular. CVS and respiratory system normal. Uterus 26 – 28 weeks size, relaxed, FHS 136 / min. regular.

Considering the past history a differential diagnosis of HPP, Poliomyelitis and collagen vascular disease was considered. Investigations showed Hb 7.9 g/dl, TC 13900 cmm N 84 L 12 BE 4, ESR 87, S. Creatinine 0.88, RBS 74 mg/dl, Creatinine Kinase 238 (N = 24 – 195 U/L), CKMB 22 (upto 5% of total CK is normal). Urine Sp Gr 1010 pH 6.5 Sugar nil, Alb – trace, WBC 6-8/HPF, Culture – no growth. S. Electrolytes (meq/L) Na 140, K 1.7, Cl 100, Mg 0.8 mmol/L, Ca 8.2 mg/dl, Urine K 30 meq/d, ECG – normal, ABG pH 7.7288, pCO2 18.3, pO2 100.6, HC 03 8.5, SO2 97.2%, T3 1.2 ng/ml (0.7 – 2 ng/ml) T4 8.2 ug/dl (5.5 – 13.5 ug/ml) TSH 4 (up to 9uIU/ml is normal). Rheumatoid Factor negative.

Based on the investigations, a diagnosis of Hypokalemic periodic paralysis was made. She was given I/V KCL 40 meq in normal saline at 10 meq/hr and oral KCL syrup was started. I/V K was tapered and she maintained Serum K on 3 tsp KCL syrup q 6 hr. K level are shown in Table I.

Table I – Showing Serum Potassium Levels and Treatment Received

Date	Level of K in Serum meq /L	Treatment Given
8th May	1.7	I/V KCL 10 meq/hr + oral KCL syrup 3 tsp q 6 hr
9th May	2.5	As above
10th May	3.0	I/V KCL tapered, oral continue
11th May	3.2	As above
12th May	3.5	On oral KCL only
3rd June	3.4	On Oral KCL only
23rd June	3.2	On oral KCL only, FTND of IUGR baby
1st wk of Aug.	3.2	On oral KCL 3 tsp 6 hr
No further follow up		

She was discharged on 03/06/96 and subsequently had full term normal delivery of a SGA 1.5 kg female baby on 23/07/96, without any complications. 15 days postnatal serum K was 3.2 meq/L on oral KCL.

Conclusion

Hypokalemic Periodic Paralysis is rare in pregnancy but it should be considered when a healthy young woman present with acute paralysis.