EXTREME ALTITUDE CHRONIC MOUNTAIN SICKNESS MISDIAGNOSED AS HIGH ALTITUDE CEREBRAL EDEMA

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INTRODUCTION

- Chronic mountain sickness (CMS) represents a variably reversible asynchronous syndrome .
- CMS can be accelerated by smoking induced Carboxyhemo-globinemia at high altitudes.
- Explorers and adventurers , 140 million people residing at altitudes above 3000 m/9800 ft are at risk of contracting altitude illness.
- CMS can be asymptomatic or oligosymptomatic at extreme altitudes above 5500 m/18 000 ft
- It may be confused with high altitude cerebral edema (HACE).

PATIENT'S DETAILS

- A 26-year-old healthy non-smoking, non-drinking explorer from
- plains country
- He underwent an extended staged-graded acclimatization schedule before reaching 6400 m/21 000 ft.
- After an uneventful stay of 70 days at that altitude, he reported moderate to severe occipital headache, breathlessness, and two episodes of vomiting
- It was reported to the medical doctor staying at 5790 m/19 000 ft in November.
- There was no history of gain in altitude or exertion.
- Altitude illness was suspected
- Rest, plenty of fluids, acetaminophen 500 mg, acetazolamide 250 mg
- and intravenous dexamethasone 8 mg were initiated following which the patient reported mild improvement. .
- He continued to have headache, breathlessness, and nausea the next day along with insomnia.
- His condition deteriorated with disorientation reported by other people around him the following day.
- He was descended from 6400 m/21 000 ft to 5790 m/19000 ft,
- He crossed an ice wall on foot supported by climbing ropes and two assistants
- Preliminary examination revealed a conscious, oriented, but flushed
- individual with a heart rate of 144 beats per minute.
- Blood pressure 160/110 mm Hg, respiratory rate 24 breaths/min, a normal temperature, and 90% oxygen saturation.
- Cyanosis, clubbing, and pedal edema were not present.
- An immediate air evacuation was requisitioned, but the helicopter could not land at 6400 m/21 000 ft due to heavy winds.
- The explorer was towed behind a snow scooter in a supine position inside a sleeping bag.
- He was transported approximately 50 km glaciated terrain to 4570 m/15 000 ft from where he was evacuated by air to a secondary care facility
- His hemoglobin was 21 gm/dL on two occasions .
- There was no other changes in routine hematological or clinical chemistry parameters.
- His electrocardiogram (ECG) was normal
- He was diagnosed as a case of CMS
- Qinghai CMS score >61 and he was swiftly transferred to a tertiary care facility where the findings were confirmed.
- A 6-month follow up revealed symptomatic improvement and a hemoglobin of 17 gm/dL

DISCUSSION AND CONCLUSION

- This case represents the insidious nature of altitude sickness in acclimatized subjects.
- The presentation of headache and vomiting could have been caused by specific altitude illness, fatigue, dehydration, or hypoglycemia.
- Altitude illness has been reported in acclimatized subjects at extreme altitudes with no history of recent elevation gains.
- Mountain sickness-AMS,SMS,CMS
- The threshold altitude for human dwelling is 4500 m/14 700 ft, most humans can never acclimatize beyond that altitude.
- CMS at extreme altitudes presents difficulty in diagnosis, management, and evacuation.
- A high index of suspicion based on ongoing screening programs for acclimatized subjects may facilitate early diagnosis.
- Long-term management and follow-up may be required for prognosticating CMS.

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