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First Saudi rapid-onset obesity with hypothalamic dysfunction, hypoventilation and autonomic dysregulation (ROHHAD): Case report

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ROHHAD is a rare disease that affects young children at 1.5 years of age; clinically it is defined as the rapid-onset obesity with hypothalamic dysfunction, hypoventilation and autonomic dysregulation. According to the NIH ROHHAD morbidity rate is high especially with delayed diagnosis and intervention. Little is known about the ROHHAD syndrome in the Saudi pediatrics population. Our main objective of the current study is to explore the occurrence of the ROHHAD syndrome in Saudi children. We are using the international definition for ROHHAD to identify the possible cases, particularly the NIH definition. Moreover we carried out the required diagnosis including a full blood profile and clinical assessment. Our findings showed a positive case of ROHHAD to a three years old girl that was admitted to the King Fahad Hospital, May 2012. The child suffered from hyperphagia polydipsia and polyuria, starting the age of 30 month, as a result of which she has gained weight of 33 kg with BMI of 28. Never the less the investigations revealed a high prolactin level of 2076 ng/ml with continuous repeat of t: 1490 ng/ml. Sleep studies were carried out and showed Sleep apnea by which the ROHHAD syndrome was confirmed. In conclusion, here we identified for the first time the ROHHAD case in Saudi Arabia which also the first reported in the GCC (Gulf Cooperation Council). More studies are needed with multi-disciplinary approach to investigate the ROHHAD syndrome that might be overlooked in our region.

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Impact of backpack load on ventilatory function

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Objective: To explore the backpack load as a percentile of body weight (BW) and its impact on ventilator function including tidal volume (Vt), vital capacity (VC), forced vital capacity (FVC), forced expiratory volume in one second (FEV1), FEV1/FVC, peak expiratory flow (PEF) and maximum voluntary ventilation (MVV) among 9-12 year old Saudi girls.

Methods: This is a prospective, experimental study of 91 Saudi girls aged between 9-12 years from primary schools in Riyadh, Saudi Arabia. The study took place in King Saud University, Riyadh, Saudi Arabia between April 2012 and May 2012. Ventilator function was measured under 2 conditions: A free standing position without carrying a backpack and while carrying a backpack.

Results: The backpack load observed was 13.8% of the BW, which is greater than the recommended limit (10% BW). All values of ventilator function were significantly reduced after carrying the backpack ($p < 0.001$) with the exception of FEV1/FVC ($p > 0.178$). The reduction was observed even with the lowest backpack load (7.4% BW).

Conclusion: A significant reduction was reported for most of the ventilator function parameters while carrying the backpack. This reduction was apparent even with the least backpack load (7.4% BW) carried by the participants. This study recommends that the upper safe limit of backpack load carried by Saudi girls aged 9-12 years should be less than 7.4% of BW.

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