Successful Treatment of NPPV in a Patient Demonstrating Obesity Hypoventilation Syndrome with Hypercapnic Respiratory Failure

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Abstract：A 59-year-old male had been referred to our hospital with simple obesity, essential hypertension, hyperlipidemia and hyperuricemia since 1996. However, his body weight had recently increased. In July 2000, he noticed a mild disturbance of consciousness, cyanosis, and flapping tremors 10 days prior to his visit to our hospital. On admission, he had severe hypoxemia and hypercapnia with respiratory acidosis. He was extremely obese, and thus was diagnosed to have obesity hypoventilation syndrome. The all-day use of NPPV relieved the symptoms of hypercapnia and consciousness disturbance. One month after his discharge, the patient's heart failure also improved by NPPV or nasal CPAP. Thereafter, owing to diet therapy and physical exercise, his body weight decreased from 102 kg (BMI 38.9) to 86 kg (BMI 32.8). An abdominal CT scan also revealed a remarkable decrease in the visceral fatty volume. As a result, a reduced body weight associated with an improved mobility of the diaphragm was thus found to increase his ERV, VC and CO_2-ventilatory response.

Key words：**Obesity hypoventilation syndrome, Non invasive positive pressure ventilation (NPPV), Visceral fatty area, Body weight**