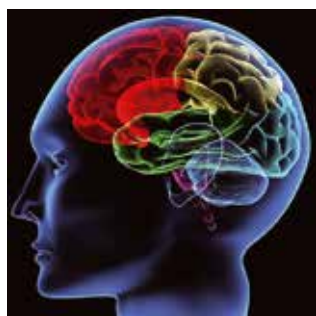


康家睡眠教室

25
第25期

呼吸機治療對腦部有更多的好處



神經元影像學研究是首個可以證明由嚴重睡眠窒息症引致的腦白質損壞，是可用呼吸機治療去逆轉的。

研究結果顯示未接受治療的嚴重睡眠窒息症患者，腦內各區域的腦白質完整性有明顯減少的跡象。這大腦的損害會對認知能力、情緒和警覺性有壞影響。雖然三個月的呼吸機治療只能有限地修復已損壞的大腦結構，但是十二個月的呼吸機治療可幾乎還原腦白質的原有結構。另外，呼吸機治療亦可令認知測試成績、情緒、警覺性和生活質素有所改善。

“阻塞性睡眠窒息症患者的大腦結構性神經系統損害是可以靠有效的治療逆轉的” 主要研究人員和作者意大利米蘭聖拉斐爾醫院和聖拉斐爾生命健康大學的睡眠障礙中心臨床心理學博士Vincenza Castronove說 “如果患者能持續接受呼吸機治療，是有助回復正常的大腦結構。”

醫學雜誌Sleep九月號發表了一項名為“治療前後的睡眠窒息症患者腦白質的完整性”的研究。當中指出“阻塞性睡眠窒息症是一種具破壞性的疾病，因為它可以損害健康和增加死亡風險。”美國睡眠學會主席以及健康睡眠計劃代言人Timothy Morgenthaler博士說 “治療睡眠窒息症可改善生活及拯救生命。”

這項研究共有17名平均年齡為43歲，未經治療的嚴重阻塞性睡眠窒息症患者參與。他們會在未經治療、使用呼吸機後的3個月及12個月接受評估。包括神經心理學的評估和擴散張量磁共振影像測試。擴散張量磁共振影像是一種磁共振影像用作量度腦組織中水的流動。評估結果會與15名年齡相約，健康的對照者進行比較。

在一個較早前的研究中，Vincenza Castronove的研究小組發現嚴重睡眠窒息症患者的腦灰質體積亦有類似的損害。經過三個月的呼吸機治療後，灰質體積有明顯的增加。作者根據兩項研究的結果，推斷出大腦的白質比灰質需要更長的時間來復原。

“我們可以從兩個研究中發現這類腦部的損傷可以透過治療得到改善。”主要研究者科羅拉多州丹佛市國立猶太醫學中心醫學院副教授及飛利浦偉康公司全球臨床研究高級總監博士Mark Aloia說。“我們都知道呼吸機治療可維持患者晚間的呼吸；但這治療帶來的效果，如對大腦功能和結構的影響其實更為重要。”

參考文獻: Vincenza Castronovo, PhD1; Paola Scifo, PhD2,4; Antonella Castellano, MD3,4; Mark S. Aloia, PhD6; Antonella Iadanza, MSc3,4; Sara Marelli, PhD1; Stefano F. Cappa, MD5; Luigi Ferini Strambi, MD1; Andrea Falini, MD3,4

1Sleep Disorders Center, Scientific Institute and University Ospedale San Raffaele, Milan, Italy; 2Nuclear Medicine Department, Scientific Institute and University Ospedale San Raffaele, Milan, Italy; 3Neuroradiology Unit, University Ospedale San Raffaele, Milan, Italy; 4CERMAC, Scientific Institute and University Ospedale San Raffaele, Milan, Italy; 5Center for Cognitive Neuroscience, Scientific Institute and University Ospedale San Raffaele, Milan, Italy; 6Department of Medicine, National Jewish Medical and Research Center, Denver, CO, More Brain Benefits with CPAP Therapy, September 12, 2014

康家醫療12月專題講座



內 容：探討熱門都市病 - 高血壓與睡眠窒息症
講 者：**呼吸科資深護師 戴金瑩姑娘**
日 期：2014年12月20日 (星期六)
時 間：11:00 — 13:00
地 點：康家醫療有限公司
荔枝角青山道501號至503號
國際工業大廈1樓全層
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The HomeCare Medical Ltd.

DECEMBER 2014

Homecare Classroom on Sleep Apnea

ISSUE 25

More Brain Benefits with CPAP Therapy



A neuroimaging study is the first to show that white matter damage caused by severe obstructive sleep apnea can be reversed by CPAP therapy.

Results show that participants with severe, untreated sleep apnea had a significant reduction in white matter fiber integrity in multiple brain areas. This brain damage was accompanied by impairments to cognition, mood and daytime alertness. Although three months of CPAP therapy produced only limited improvements to damaged brain structures, 12 months of CPAP therapy led to an almost complete reversal of white matter abnormalities. Treatment also produced significant improvements in nearly all cognitive tests, mood, alertness and quality of life.

"Structural neural injury of the brain of obstructive sleep apnea patients is reversible with effective treatment," said principal investigator and lead author Vincenza Castronovo, PhD, clinical psychologist at the Sleep Disorders Center at San Raffaele Hospital and Vita-Salute San Raffaele University in Milano, Italy. "Treatment with CPAP, if patients are adherent to therapy, is effective for normalizing the brain structure."

The study "White Matter Integrity in Obstructive Sleep Apnea before and after Treatment" is published in the September issue of the journal Sleep. "Obstructive sleep apnea is a destructive disease that can ruin your health and increase your risk of death," said American Academy of Sleep Medicine President Dr. Timothy Morgenthaler, a national spokesperson for the Healthy Sleep Project. "Treatment of sleep apnea can be life-changing and potentially life-saving."

The study involved 17 men with severe, untreated obstructive sleep apnea who had an average age of 43 years. They were evaluated at baseline and after both three months and 12 months of treatment with CPAP therapy. At each time point they underwent a neuropsychological evaluation and a diffusion tensor imaging examination. DTI is a form of magnetic resonance imaging that measures the flow of water through brain tissue. Participants were compared with 15 age-matched, healthy controls who were evaluated only at baseline.

A previous study by Castronovo's research team found similar damage to gray matter volume in multiple brain regions of people with severe sleep apnea. Improvements in gray matter volume appeared after three months of CPAP therapy. According to the authors, the two studies suggest that the white matter of the brain takes longer to respond to treatment than the gray matter.

"We are seeing a consistent message that the brain can improve with treatment," said co-principal investigator Mark Aloia, PhD, Associate Professor of Medicine at National Jewish Health in Denver, Colorado, and Senior Director of Global Clinical Research for Philips Respironics, Inc. "We know that PAP therapy keeps people breathing at night; but demonstrating effects on secondary outcomes is critical, and brain function and structure are strong secondary outcomes."

Reference: Vincenza Castronovo, PhD1; Paola Scifo, PhD2,4; Antonella Castellano, MD3,4; Mark S. Aloia, PhD6; Antonella Iadanza, MSc3,4; Sara Marelli, PhD1; Stefano F. Cappa, MD5; Luigi Ferini Strambi, MD1; Andrea Falini, MD3,4

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Seminar of December



Content: Hypertension and Sleep Apnea

Guest Speaker: **Advanced Practice Nurse in Respiratory Medicine**

Ms Tai Chin Eng Mandy

Date: 20 December 2014 (Saturday)

Time: 11:00 - 13:00

Venue: The HomeCare Medical Ltd.

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