



# Microvascular endothelial function in obstructive sleep apnea: Impact of continuous positive airway pressure and mandibular advancement

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Auteur	Trzepizur, Wojciech [1], Gagnadoux, Frédéric [2], Abraham, Pierre [3], Rousseau, Pascal [4], Meslier, Nicole [5], Saumet, Jean-Louis [6], Racineux, Jean-Louis [7]
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Mots-clés	Continuous [8], Endothelial [9], mandibular [10], Microcirculation [11], Obstructive [12], treatment [13]
Résumé en anglais	<p>Objectives Endothelial dysfunction has been proposed as a potential mechanism implicated in the pathogenesis of cardiovascular complications of obstructive sleep apnea syndrome (OSAS). This study aimed to evaluate the microvascular endothelial function (MVEF) in OSAS and the impact on MVEF of 2 months of treatment with continuous positive airway pressure (CPAP) and mandibular advancement device (MAD). Methods Microvascular reactivity was assessed using laser Doppler flowmetry combined with acetylcholine (Ach) and sodium nitroprusside (SNP) iontophoresis in 24 OSAS patients and 9 control patients. In 12 of the 24 OSAS patients, microvascular reactivity was reassessed after 2 months of CPAP and MAD using a randomized cross-over design. Results Ach-induced vasodilation was significantly lower in OSAS patients than in matched controls and correlated negatively with apnea hypopnea index (<math>r = -0.49</math>, <math>p &lt; 0.025</math>) and nocturnal oxygen desaturations (<math>r = -0.63</math>, <math>p &lt; 0.002</math>). Ach-induced vasodilation increased significantly with both CPAP and MAD. The increase in Ach-induced vasodilation under OSAS treatment correlated with the decrease in nocturnal oxygen desaturations (<math>r = 0.48</math>, <math>p = 0.016</math>). Conclusion Our study shows an impairment of MVEF in OSAS related to OSAS severity. Both CPAP and MAD treatments were associated with an improvement in MVEF that could contribute to improve cardiovascular outcome in OSAS patients.</p>
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Titre abrégé Microvascular endothelial function in obstructive sleep apnea

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### Liens

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