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C0231

Risk analyses of pressure ulcer in tetraplegic spinal cord-injured persons: A French long-term survey



Marc Le Fort^{1,*}, Maude Espagnacq², Brigitte Perrouin-Verbe¹, Jean-François Ravaud³

¹ Hôpital Saint-Jacques, MPR neurologique, Nantes, France

² Institut de recherche et de documentation en économie de santé, Paris, France

³ CERMES3, Inserm, CNRS, EHESS, université Paris Descartes, Villejuif–Paris, France

* Corresponding author.

E-mail address: marc.lefort@chu-nantes.fr (M. Le Fort)

Objective To identify the long-term clinical, individual, and social risk factors for the development of pressure ulcers (PUs) in traumatic spinal cord-injured persons with tetraplegia (TSCI).

Material/Patients and methods/Design Cohort survey with self-applied questionnaires in 1995 and 2006. Thirty-five French-speaking European physical medicine and rehabilitation centers participating in the Tetrafigap surveys. A total of 1641 tetraplegic adults were surveyed after an initial post-traumatic period of at least 2 years. Eleven years later, a follow-up was done for 1327 TSCI, among whom 221 were deceased and 547 could be surveyed again. Main outcome measure was the proportion of PUs documented at the various defined time points, relative to the medical and social situations of the TSCI, by using univariate analyses followed by logistic regression.

Results Of the participants, 73.4% presented with a PU during at least one period after their injury. Four factors had an effect on the occurrence of PU at the long-term. On the one hand, a protective feature for this population, persons with incomplete motor impairment (OR=0.5) and moreover those who were able to walk (OR=0.2); on the other hand, a strong predictive factor was the development of a PU during the initial post-trauma phase (OR=2.7). Finally, a significant situational factor was the lack of social network (OR=3.1).

Discussion/Conclusion We believe that the highlighting of a motor incomplete feature of SCI, protective for the development of PU, and of a medical risk factor, an early PU, which served as a definitive marker of the trajectory of TSCI, together with a social situational factor, indicates the crucial role of initial management and of long-term follow-up.

Keywords Risk factor; Cohort study; Recurrence; Questionnaire; Follow-up study

Disclosure of interest The authors have not supplied their declaration of competing interest.

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C0232

Melatonin secretion and poor sleep quality in patients with tetraplegia: A pilot study



Raphaëlla Davillé-Blicq^{1,*}, Maria-Antonia Quera-Salva¹, Thibaud Lansaman¹, Véronique Raverot², Djamel Bensmail¹

¹ AP-HP, groupe hospitalier R-Poincare, MPR, Garches, France

² CHU de Lyon, biologie médicale, Lyon, France

* Corresponding author.

E-mail address: raphaelladaville@gmail.com (R. Davillé-Blicq)

Objective We evaluated the secretion of melatonin, the sleep quality and the relation between both in tetraplegics versus paraplegic patients and healthy volunteers.

Material/Patients and methods This observational non-randomised study was conducted from April 2015 to November 2016 includes tetraplegics versus paraplegics and healthy volunteers. Urinary 6-sulfatoxy-melatonin (U6SM) was measured during 5 period per day (8 h–12 h; 12 h–16 h; 16 h–20 h; 20 h–00 h;

00 h–8 h). Sleep quality was evaluated on Pittsburgh Sleep Quality Index and sleepiness on Epworth Sleepiness Scale. Correlation between U6SM dosage and sleep quality and sleepiness was analyzed.

Results Twenty-two tetraplegic patients (20 men and 2 women), and 4 paraplegics were included in the study. Fifteen tetraplegic patients (68.1%) had an absence of melatonin secretion, 6 (27.2%) had a decreased secretion with a shift of melatonin secretion. The melatonin secretion was normal in one C5 AIS-A patient (4.5%). The Pittsburgh Sleep Quality Index showed a poor sleep quality in tetraplegics (9.28 ± 4.90) and Epworth Sleepiness Scale showed a moderate sleepiness in tetraplegics (9.14 ± 5.12). We did not observe a significant correlation between melatonin secretion and sleep quality. There was a significant correlation between melatonin secretion and sleepiness. Unlike data of the literature, secretion of melatonin was not strictly normal in paraplegic patients.

Discussion/Conclusion Secretion of melatonin is abnormal in patients with tetraplegia. It may partly explain sleep impairment of patients with tetraplegia. Further studies are needed to better understand the impact of this absence of melatonin secretion and to assess the effect of melatonin treatment in this population of patients.

Keywords Tetraplegia; Spinal cord injury; Sleep; Melatonin; Sleep quality; Sleepiness

Disclosure of interest The authors have not supplied their declaration of competing interest.

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C0233

Factors affecting the compliance with ventilatory assistance using positive pressure to treat sleep apnea for spinal cord-injured patients: Results of qualitative study



Bulteel Clémence^{1,*}, Alice Le Bonnicc², Isabelle Laffont¹, Olivier Jonquet³, Claire Jourdan¹, Florence Cousson-Gelie², Anthony Gelis⁴

¹ CHU Lapeyronie Montpellier, médecine physique et réadaptation, Montpellier, France

² Laboratoire Epsilon EA 4556, Montpellier, France

³ CHU Lapeyronie, service de réanimation médicale et grands brûlés, Montpellier, France

⁴ Centre Mutualiste Propara, Montpellier, France

* Corresponding author.

E-mail address: cle.bulteel@hotmail.fr (B. Clémence)

Objective Sleep apnea is a frequent issue for the general population, with a prevalence between 2 and 4%. It is 2 to 5 times more frequent for the spinal cord-injured population. The night ventilation by positive pressure is the reference treatment but the compliance is still an issue. Its determinants are well studied in the general population, but we have limited data for the spinal cord-injured patients. The goal of this study is to elaborate a comprehensive model of compliance with ventilatory assistance using positive pressure for spinal cord-injured patients affected by sleep apnea.

Material/Patients and methods Qualitative, prospective, mono-centric study based on semi-directed interview, which are based on Bandura social cognitive theory. Each interview is recorded and transcribed. Data are analysed by the working group according to the grounded theory: codification, categorisation and liking.

Results We included 15 patients which allows to generate 90 codes. This code's categorisation is in process and highlights the fact that spinal cord-injured patients face the same compliance determinants than the general population (factors related to material, provider, medical team, patient belief) but also factors specific to