Cytisine: a good example for hospitals

Citizina: un bun exemplu pentru spitale

Dear Editor

Effective tobacco smoking cessation drugs are most needed in low- and middle-income countries, where tobacco consumption is very prevalent, and the access to first line medicines is more problematic than in high income ones. A very recent editorial, authored by some of the leading world experts in the treatment of tobacco addiction⁽¹⁾, clearly describes cytisine (CY), an alpha4 beta2 nicotinic partial agonist receptor with the same mechanism of action as varenicline, as one of the most efficient drugs used for smoking cessation. CY widespread use in clinical practice is indicated as a priority, even more than the conduction of further clinical trials⁽¹⁾.

CY's low cost could better support smoking cessation, particularly in population groups with lower income and in hard-to-treat groups (i.e., people living with mental illness) who show a lower success rate for smoking cessation and higher rates of smoking-related diseases compared to other smokers^(1,2). The low cost of CY is also its "Achille's heel". The long registration procedures in Western European (EU) countries and in USA restrict CY's use to some Eastern EU countries. In most EU countries, in Italy as well, there is the same paradoxical situation: the drug, registered in 4 EU countries (Poland, Bulgaria, Latvia and Lithuania), and 13 non EU countries (Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldava, Russia, Serbia, Tajikistan, Turkmenistan, Uzbekistan and Ukraine), could be prescribed as galenic formulation by physicians, but only few physicians know its proprieties and few pharmacists agree to formulate it(1).

It has been shown that 20% of the smokers keep smoking also during their hospital stay $^{(3,4)}$.

Since February 2016, The Verona University Hospital (with a total of 1200 beds) provides a CY galenic formulation to smoker patients admitted to hospital.

Three principal points to note for CY treatment are:

- 1. offering efficient and safe pharmacological support to hospitalized smokers;
- promoting the continuity of their care also after discharge to reduce the risk of relapses;
- 3. cost-cutting related to Nicotine Replacement Therapy.

CY could be the ideal drug for hospitalized smoker patients because it has a fast onset on action that allows to apply protocols without titration, unlike varenicline⁽²⁾.

CY presents rare pharmacological interactions and this fact reassures clinicians⁽²⁾. Finally, the very low cost is a good option for patients and stakeholders.

The Verona Hospital Pharmacy fits out CY galenic tablets (1.5 mg). Hospital units recommend CY for smoker patients only with a prescription provided by a specialist consultant in smoking cessation.

It is premature to draw conclusions about CY's effectiveness. However, we have seen a good response and no significant adverse reactions so far.

Smoking cessation interventions for hospitalized smokers proved to be effective in promoting smoking cessation, but only if the tobacco dependence treatment continues after the patient leaves the hospital⁽⁴⁾. Consistent with this reporting, patients are advised to continue the therapy after discharge.

In only few months, we have observed a significant increase of CY galenic formulations fit out by community pharmacies of Verona.

Following our example, CY has now a role in the smoking cessation program, not only in our university hospital, but also in some neighbouring smoking cessation services.

Keywords: cytisine; inpatient treatment; smoking cessation

Conflict of interests: Fabio Lugoboni is Consultant of the Varenicline European Advisory Board.

Fabio Lugoboni, Stefania Schiroli, Sara Pigozzo, Paola Marini

Pharmacy Department, Verona Civil Hospital, Verona, Italy

Corresponding author: Fabio Lugoboni

Addiction Unit, Department of Internal Medicine, Verona University Hospital, Verona, Piazzale Scuro 10, 37134, Italy, E-mail: fabio.lugoboni@ospedaleuniverona.it

References

- Walker N, Bullen C, Barnes J, McRobbie H, Tutka P, Raw M. et al. Getting Cytisine licensed for the use world wide: a call to action. Addiction 2016, doi: 10.1111/add.13464.
- 2. Hajek P, McRobbie H, Myers K. Efficacy of cytisine in helping smokers quit: systematic review and meta-analysis. Thorax 2013; 68: 1037-1042.
- Regan S, Viana JC, Reyen M, Rigotti AN. Prevalence and predictors of smoking as Inpatients during a Hospital Stay. Arch Inter Med 2012; 172: 1670-1674.
- Reid ZZ, Regan S, Kelley JH, Streck JM, Ylioja T, Tindle HA et al. Comparative Effectiveness of Post-Discharge Strategies for Hospitalized Smokers: study protocol for the Helping HAND 2 randomized controlled trial. BMC Public Health 2015; 15:109.

234