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DYSPHARMA: AN ITALIAN WEB-APPLICATION FOR DRUG THERAPY MANAGEMENT IN DYSPHAGIC PATIENTS



www.dyspharma.it

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What was done?:

To properly manage oral therapy in dysphagic patients, a multidisciplinary team developed an algorithm and applied it to over 8000 medicinal products available as solid oral dosage forms (SODSs). A web-based, decision-making tool was launched to support healthcare providers (HCPs) during the prescription, compounding and administration of SODFs to dysphagic patients.

Why was it done?:

Dysphagia is a well-known community issue that affects primarily aged people [1]. The availability of appropriate dosage forms for dysphagic patients is essential to guarantee therapy adherence. Extemporaneous compounding of SODSs (e.g. crushing tablet or opening capsules and dispersing the obtained powder in an appropriate base or vehicle) is a common practice due to the unavailability of different dosage forms to satisfy the current needs of patient. However, compounding practice is neither risk-free nor error-free [2]. The aim of the work was to realise a web application to support HCPs in drug therapy management of dysphagic patients.

How was it done?:

An extensive review of the Italian pharmaceutical market database, product characteristic summaries and scientific literature were used for data collection. For each prescription drug formulated as SODF, an information sheet was elaborated and continuously updated.

What has been achieved?:

DysPharma (www.dyspharma.it) is an on-line support currently available and under restyling. By registering and logging-in, it is possible to access technical content (Figure 1) that comprises medicinal product details, drug-food interactions, extemporaneous compounding methods, and risk symbols (Figure 2).

Medicinal products can be searched by active ingredient name, medicinal product name, and marketing authorisation. Customised symbols are reported for:

- do not crush tablets (A) or open capsules (B),
- do not split tablets (C),
- to wear personal protection devices in case of manipulation of hazardous drugs (D),
- drug associated with dry mouth (E).



Figure 2: Risk symbols.

What next?:

This decision support tool may be integrated with computerised medical records to reduce medication-prescribing and administering errors and to improve clinical outcomes of dysphagic patients.

References:

- [1] Clavé, Pere, and Reza Shaker. "Dysphagia: current reality and scope of the problem." *Nature Reviews Gastroenterology & Hepatology* 12.5 (2015): 259.
[2] Logrippio, Serena, et al. "Oral drug therapy in elderly with dysphagia: between a rock and a hard place!" *Clinical interventions in aging* 12 (2017): 241.

Conflict of interest:

The authors declare no conflict of interest and any financial relationship and support with pharmaceutical companies and industries.

Figure 1: Example of technical content of 100 mg cardioaspirin tablets elaborated for each medicinal product listed in DysPharma database.



<https://www.eahp.eu/gpis/dyspharma-italian-web-application-drug-therapy-management-dysphagic-patients>