

Off-label drug use at the University Hospital of Catania: 2016 update

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Off-label use is the practice of prescribing drugs for unapproved indications or age group, dose, or regimen of administration¹. Off-label use is widespread worldwide and is more common in some populations, such as children, pregnant women and oncologic patients (Choonara I, Conroy S. 2002; Rayburn WF, Turnbull GL 1995). It is not uniformly regulated in different country. Despite the lack of a formal regulation in USA, it is legal for physicians to prescribe off-label drugs (Lerose R et al. 2012).

In Italy, a comprehensive body of legislation has been produced in order to regulate off-label use. Law 648/1996 establishes that a medicine can be prescribed and reimbursed by National Health System (NHS) in the following cases: (1) drugs not yet available in Italy but recently approved in other countries; (2) medicines not yet authorized in Italy but currently used in clinical trials; (3) drug used for not approved indications. All these drugs must be included in a list by the Technical Scientific Commission (CTS) of the Italian Medicines Agency (AIFA).

Law nr. 94/1998 allows the physician, under his/her direct responsibility, to use an off-label drug based on new efficacy data. In this case, drug costs not covered by NHS.

In compliance with national laws, Sicilian Department of Health has regulated the formal procedures that professionals must follow for off-label drug prescription. In an hospital setting, prescribers must request authorization for off-label treatment to the Health Director, and costs are covered by the hospital.

Regional Pharmacovigilance Centre of Catania, within the Clinical Pharmacology Program of University Hospital of Catania, supports Health Director in the assessment, approval, management and follow-up of requests for off-label drug prescriptions according to L. 94/1998 and to L. 648/96.

The main objective of this project was to evaluate off-label drug use at the University Hospital of Catania.

Methods

We used a database that collect all the requests for off-label use evaluated by the Clinical Pharmacology Program. Off-label prescriptions were classified by field of application (oncology, rheumatology, cardiology, etc.) and divided according to L. 94/1998 and L. 648/96.

Results

In 2016, almost 445 requests for off-label use were evaluated for their appropriateness. Almost 63% of these requests has been approved according to L.94/1998 (Fig. 1). As shown in figure 2, it's been detected an increase in the number of requests from 2012 (year of institution of the Program). Most of the prescription requests came from Hematology and bone marrow transplant

division (21%) and Pediatric onco-hematology (21%; Fig. 3). Figure 4 shows differences in the number of prescriptions according to L. 94/1998 and L. 648/96 per department. The top ten drugs per number of prescriptions are listed in table 1, differentiated according to L. 94/1998 or 648/96.

Discussion

Appropriateness in off-label drug prescriptions must be carefully assessed in order to ensure this use occurs only in presence of data supporting a favorable risk/benefit profile.

The experience of Clinical Pharmacology Program of the University Hospital of Catania shows that off-label use is frequent in special populations (oncologic patients and children), in accordance with literature (Choonara I, Conroy S. 2002; Rayburn WF, Turnbull GL 1995; Mortenson LE 1991; Levêque D. 2008). During 2016 the most prescribed drug according to L. 648/96 was bendamustine for various hematologic indications, whereas the most prescribed drug according to L. 94/1998 was mitomycin used in glaucoma surgery. However, since July 2016 this drug has been introduced in 648 List, and we approved 16 requests according to L. 648/1996.

Monitoring off-label prescriptions in an hospital setting could allow to detect unmet medical needs and to identify drugs with favorable risk/benefit profile which could be included in the lists of L. 648/1996 and reimbursed by the NHS.

References

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