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Review

A prudent deprescription model☆

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ABSTRACT

The therapeutic structure of health systems relies heavily on medical prescription, which generates a marked tendency to add drugs to a patient's medical history. There is an absence of incentives for professionals to reassess prescriptions and withdraw those with a negative or neutral risk/benefit. This can create a deviation of medical resources to the maintenance of useless or even harmful treatments. Deprescribing, a process of thoughtful medication withdrawal that complements moderate prescribing, is aimed to stop this unfair deviation of resources towards non-beneficial, if not maleficent, prescription.

Un modelo de deprescripción prudente

Palabras clave:
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Deprescribiendo
Retirada de medicación
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RESUMEN

La estructura terapéutica de los sistemas sanitarios descansa en gran medida sobre la prescripción, lo que genera una tendencia mantenida a sumar fármacos en la historia clínica del paciente. Por el lado contrario, destaca una ausencia significativa de estímulos sobre los profesionales para la reevaluación de prescripciones y la retirada de aquellas con un balance riesgo/beneficio negativo o neutro, lo que supone una desviación de recursos sanitarios hacia el mantenimiento de tratamientos inútiles, cuando no dañinos. La deprescripción, como la retirada meditada de medicación que complementa una prescripción prudente, está dirigida a frenar esta desviación injusta de recursos hacia prescripciones no beneficentes, cuando no maleficentes.

Introduction

The economic setback of the last five years has called into question some of the basic agreements of the social contract, such as the public health system: its cost, worth, universality and equity. Invested interests aside, it is true that the system could be more efficient, even more so when the inefficiencies may be dangerous to users.

Contact with the health system involves risks that can be prevented and any intervention aimed at avoiding these risks will be preventive, more specifically, quaternary prevention: avoiding the issues caused by health care itself.[1] One such intervention is deprescription: the *process of discontinuing the prescription of drugs by analysing them, revealing and trying to resolve their contradictions and ambiguities*.[1–3]

The Spanish Statistical Office[4] estimated the causes of death in Spain during 2011 as: 30.5% from cardiocirculatory diseases, 28.2% tumours, 10.9% respiratory diseases and 5.2% neurological diseases. In a controversial article,[5] Barbara Starfield revealed that one preventable cause of death was left out, one which is frequent enough to be in third place and pressing enough to be the only one growing: the health care system itself. She provided figures for the maleficence of the health care system, which force us to identify this damage within the system and intervene preventively. Starfield included in her count, among other things, deaths caused by drug errors in hospitals and adverse effects of drugs that can not be qualified as errors. Therefore, deprescription is an essential intervention to avoid iatrogenic mortality.

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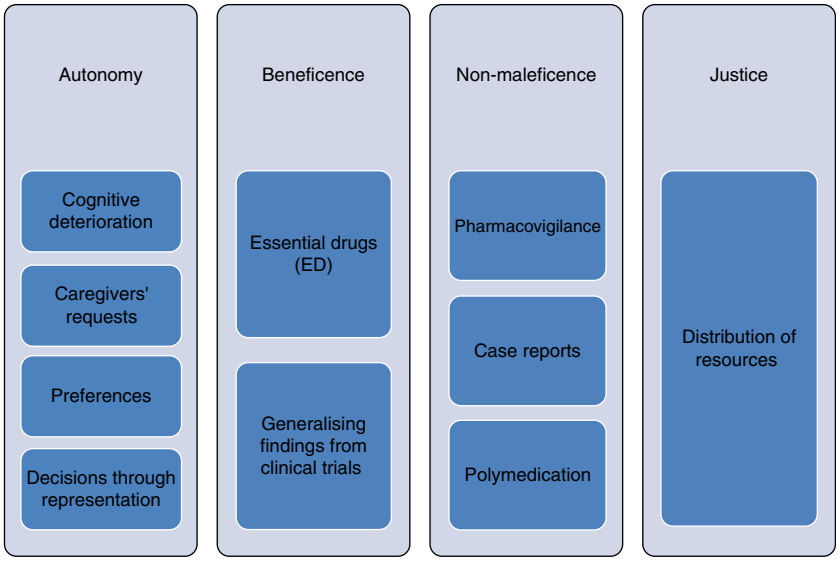

Fig. 1. Principles in the decision to prescribe/deprescribe.

Pharmaceutical prescriptions are one of the 3 pillars of health care expense in Spain.[6,7] In the last decade, they have amounted to around 20% of health care expense (1.86% of GDP).[8,9] This places the use of pharmaceutical prescriptions in the centre of interventions to avoid unnecessary health care expenses and achieve their proportionate allocation. Thus, the use of drugs can be maleficent but, as we have also seen, it can damage the health care system's distributive justice.

Having established the link between the use of drugs with the main frame of bioethics, we will determine the purpose of the present study: to reflect on deprescription and establish if it is within good medical practice; to identify the appropriate model to achieve this and the health care professionals with the power to do it.

Evidence on deprescription from recent years has emphasised one main target population: elderly people who are polymedicated and fragile (meeting 3 or more criteria: non-intentional weight loss, fatigue, weakness, gait alteration or low physical activity[10]). Polymedication—taking 5 or more drugs continuously over the last 6 months[9]—has, in institutionalised elderly people, reached a mean of 7–8 drugs a day.[11] Improper medication is that introducing a significant risk of adverse effects when there is scientific proof that there is an equally or more effective alternative.[9,12,13] Using Beers' criteria, up to 46% of institutionalised patients taking at least one inappropriate drug have been identified.[14] In people with advanced disease and short life expectancy, polymedication is frequent: one fifth of patients with cancer at the end of their life take unnecessary drugs, mainly statins.[15,16]

We have begun to collect quality evidence defining the damage caused by inappropriate prescriptions and the benefits of the withdrawal of these prescriptions.[15]

Ethical framework of deprescription: principles and conflicts

It is the responsibility of the person issuing the prescription to maximise the benefits (beneficence) and minimise damages (non-maleficence) of the prescription.[15]

In the act of prescription, scientific proof on the efficacy of a drug is the beneficence of this prescription. The related adverse effects are the maleficent risk to be avoided. The patient's consent to use the prescription, once the risks and benefits are known, is evidence of autonomy. Finally, the use of prescriptions, supported by cost-efficacy evidence, with equitable access and conditions of safety, are justice.[17]

Prescription/deprescription occurs in multiple circumstances with scarce evidence, which is why we are forced to support the prudence of the act with these 4 principles present in medical ethics (Fig. 1).[17]

Beneficence

The professional must always act in favour of the best interests of the patient. The benefit of a drug is determined by its capacity to reach the desired goals, defined by the evidence arising from studies on its efficacy.[15,17]

A prudent prescription must balance the patient's life expectancy, therapeutic goals and the time it takes the drug to achieve those goals.[1,15] Otherwise, the prescription will be candidate for deprescription.

Conflicts

In fragile, elderly people, limited life expectancy blurs the goals we seek with a drug: its beneficence is doubtful.[15]

Usually, the effect of a drug (beneficence) cannot be monitored and therefore we do not know if it is efficient for that person, and our only reference is scientific evidence.[10,17] This comes from studies of differing quality and validity that are usually carried out with young adults and in which the main target population of a large portion of drugs is systematically underrepresented: fragile elderly, polymedicated, pluripathological, terminal or immobile people. Thus, studies tend to magnify the benefits and underestimate the risks[1]: when they have been carried out on elderly people, the results have shown fewer benefits and more time needed to reach them.[13] An example of this is a clinical trial which compared zoledronate versus a placebo: it showed a decrease in the risk of hip fracture and mortality but once the subgroup of patients institutionalised in a nursing home and with cognitive disability was analysed, zoledronate provided no benefits.[18]

With such evidence, clinical practice guidelines are prepared with scarce validity for this underrepresented population, totally focused on the symptom, which leave out the patient's context, restrict medical action and trigger dangerous therapeutic cascades.[2,10,17,19]