PHARMACOLOGICAL TREATMENT OF DEPRESSION IN PRIMARY CARE.
AN UPDATED LITERATURE REVIEW (2000-2009)

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Abstract

Objective: undertreatment of depression has been regarded as a major public health problem. Aim of this paper are to evaluate recent data available in literature about the use of AntiDepressants (ADs) in primary care and to define the extent of this problematic area.

Method: we conducted a systematic, electronic search of the literature in the following databases: PubMed, PsychInfo and Embase between January 2000 and December 2009. Only observational studies were included.

Results: we identified 30 papers. Use of ADs has been increased since 1995 to nowadays, across countries. Six studies evaluating the antidepressant treatment rate in primary care attendees with a research diagnosis of depression found a rate ranging 21-65%. The rate of early discontinuation treatment, "occasional prescription", varies within the considered studies between 7-66%. Four studies provide data about 6 months treatment: overall the rate of discontinuation treatments at 6 months vary between 41.0-63.0%.

Conclusions: data presented in this review seems to demonstrate an increased appropriateness in depression treatment in primary care. New generation of ADs have favoured treatment of depression for not-psychiatric physicians. Duration of pharmacological treatment is still often inadequate.

Key Words: antidepressants, depressive disorders, primary care

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Background

Depression is a common disorder associated with high levels of disability and impairment in quality of life (Spitzer et al. 1995, Ustun et al. 2004), high health services utilization, work absenteeism, and decreased performances at work (Wang et al. 2003, Lerner et al. 2004). Epidemiological research consistently shows that depression is a frequently observed clinical condition in primary care. The WHO Collaborative Study on Psychological Problems in General Health Care (PPGHC) carried out in 15 countries worldwide reported a global 6 month prevalence of ICD-10 Current Depression of 10.4% (Goldberg and Lecrubier 1995). The more recent PREDICT study, conducted in primary care attendees of six European countries, found 6-months prevalence values of DSM-IV Major Depression ranging 6.5-18.4% in women and 4.4-12.7% in men (King et al. 2008).

Surprisingly, despite its prevalence and burden, depression is often not detected and poorly managed in primary care. In particular, studies conducted in Europe and in the US since the 1980s have consistently reported low recognition rates of depression and underprescription of antidepressant drugs (Blacker and Clare 1987, Ormel et al. 1991, Simon and von Korff 1995). Moreover, cases treated with AntiDepressants (ADs) did not always receive a dosage and/or a therapy duration in line with the recommendations included in international guidelines about depression treatment (Katon et al. 1992). In the early '90, the international multicenter WHO study on Psychological Disorders in General Health Care found that Primary Care Physicians (PCPs) were able to recognize only 39.1% of cases of ICD-10 current depression, and that the prescription of ADs was limited to 22.2 % of them (Ustun and von Korff 1995).

Undertreatment of depression has been highlighted as a major public health problem and a number of educational initiatives have been undertaken to increase PCP awareness about depression and to increase their sensitivity to the importance of providing proper treatment. In some countries, collaborative care programs between primary care and mental health

services have been developed to better manage patients suffering from depression and to support PCPs in dealing with them. The introduction of a new class of AD in the late '80, the Selective Serotonin Reuptake Inhibitors (SSRIs), has helped PCP's management because of their high tolerability and safety. Among other things, SSRIs can be easily administered even in both the older people and the medically ill patients.

The purpose of this review is to evaluate use of antidepressants in primary care by using data available in the recent literature, after the introduction of SSRI. In particular, we aim to assess, at present, the extent of under treatment of depression and of inadequacy of antidepressant treatment provided in primary care.

Methodology

Literature search

Studies were identified by searching electronic databases, scanning reference lists of articles and the index of psychiatric journals dealing with the issue of mental health in primary care. Only English articles were considered. This search was applied to the following databases: PubMed, PsychInfo and Embase covering the period from January 2000 to December 2009. The search was limited to studies on human beings. We used the following search terms to search databases: "antidepress*", "primary care", "primary care practitioner", "family practice", "family physician", "general practice", "general practitioner".

Study selection

Eligibility assessment of citation abstracts was performed by two independent researchers (F.C., M.V.).

Articles selected were observational ones reporting data on use of antidepressant drugs in the primary care setting. In order to obtain data on current practice, papers reporting only data collected before 1995 were excluded from the review. Articles reporting data on both primary care and mental health services were excluded except for those in which was possible to distinguish data related to primary care. Moreover, studies in which usual primary care practice was modified by any kind of experimental or specific project were excluded.

Identification of the data

Selected papers were assessed to extract data about one or more of the following areas:
1. Extension of use of antidepressant drugs in primary care.
2. Proportion of cases with a research interview diagnosis of depression treated by PCP.
3. Dosage of antidepressant treatment in primary care.
4. Duration of antidepressant treatment in primary care.

Results

Study selection

The search of electronic databases and reference lists of included studies, provided a total of 2884 citations (a description of the selection process is provided in Figure 1). Finally, 34 pertinent papers we identified on the basis of their abstracts and the full text of them was examined in more detail. Three studies were discarded since they reported data collected before 1995 or because they did not allow to distinguish data collected in primary care or in psychiatric setting (Lecrubier et al. 2001, Sleath et al. 2001, van Os et al. 2004). One more article (Stafford et al. 2000) was excluded because the same research project was lately expanded and reported in a second paper (Pirraglia et al. 2003). Thirty studies met the inclusion criteria and were included in the review.

Extension of antidepressants use in primary care

Ten studies conducted in primary care consistently show a substantial and continuous increasing trend in AD use across countries, since the 90's to nowadays (**table 1**). The increasing trend ranges between 20% to 280%. Different periods of time were considered and different methods to evaluate the pharmacological prescription rate were used. The main adopted method was the Defined Daily Dosage (DDD) value which represents the assumed average maintenance dose per day, for a drug used for its main indication in adults (Ruiz-Doblado and Caraballo-Camacho 2002, Hall et al. 2003, Munoz-Arroyo et al. 2006, Ubeda et al. 2007). Three studies considered the total number of AD prescriptions (Lawrenson et al. 2000, Middleton et al. 2001, McManus et al. 2003), while two evaluated the number of primary care visits with AD prescriptions (Van Marwijk et al. 2001, Pirraglia et al. 2003). Finally, Trifirò et al. (2007) assessed the annual prevalence of AD treatment, calculated as the number of AD users divided by the number of subjects registered in the GPs' lists in the observation year.

All the considered studies showed an increase of SSRI utilization. Pirraglia et al. (2003) observed that each new agent tended to increase after its introduction although there was not a corresponding decrease of the previously introduced, potentially competitive, agents (with the exception of the oldest SSRI, fluoxetine). The trend of TriCyclic Antidepressants (TCAs) prescriptions appears more heterogeneous: four studies showed an increase, two reported no difference and one study showed a decrease in TCAs prescription rate in the periods considered. However, TCAs, as well as other antidepressants, represented a very small proportion of prescriptions.

Use of antidepressants in people with diagnosis of depression

Seven studies evaluated the antidepressant treatment rate in primary care attendees, with a research

Table 1. *Extension of antidepressant use in primary care*

Author, year	Country	Period (years, n)	Diagnosis of depression	Increase rate %	Trend for AD classes
Lawrenson 2000*	UK	1991-96 (6)	Yes	100	↑ SSRIs, ↑ TCAs
Middleton 2001*	UK	1975-98 (23)	No	170	↑ SSRIs, ↑ TCAs
Van Marwijk 2001[§]	Netherlands	1993-98 (6)	Yes	278	↑ SSRIs, = TCAs
Ruiz-Doblado 2002[#]	Spain	1995-99 (5)	No	77	↑ SSRIs, = TCAs
McManus 2003*	Australia	1995-98 (4)	No	275	↑ SSRIs (Paroxetine)
Hall 2003[#]	Australia	1991-01 (11)	No	236	No available data
Pirraglia 2003[§]	USA	1989-00 (11)	Yes	173	↑ SSRIs, ↓ TCAs
Munoz-Arroyo 2006[#]	Scotland	1995-01 (7)	No	171	↑ SSRIs, ↑ TCAs
Trifirò 2007[¥]	Italy	2003-04 (2)	No	20	↑ SSRIs, ↑ TCAs, ↑ Other ADs
Ubeda 2007[#]	Spain	2000-04 (5)	No	44	↑ SSRIs, ↓ TCAs, ↑ Other ADs

List of abbreviations: AD=AntiDepressant; SSRIs=Selective Serotonin Reuptake Inhibitors; TCAs=TriCyciclic Antidepressants.

Indicators: * number of AD prescriptions; [§] percentage of primary care visit with AD prescription; [#] DDD Defined Daily Dose; [¥] one-year prevalence.

Table 2. *Use of antidepressant in people with diagnosis of depression*

Author, year	Country	Period	Criteria	AD rate (%)	Notes
Wittchen 2001	Germany	1999	DSM-IV	65.3	
			ICD-10	44.3	
Bellantuono 2002	Italy	1997	ICD-10	39.3	AD rate is the proportion of patients who would benefit from an AD (HDRS ≥13) and who were actually receiving such drug
Wittchen 2002	Germany	2000	DSM-IV	58.0	
Unutzer 2003	USA	1999-2001	DSM-IV	46.0	Thirty percent of the sample met criteria for Dysthymic disorder
Balestrieri 2004	Italy	1999-2000	ICD-10	20.9	AD rate is the proportion of patients who would benefit from an AD (HDRS ≥13) and who were actually receiving such drug
Berardi 2005	Italy	1996	ICD-10	40.7	
Cameron 2009	Scotland	2006	HADS ≥ 11	42.0	A score of 11 or higher at the HADS indicates the probable presence of the mood disorder

List of abbreviations: AD=AntiDepressant; HDRS=Hamilton Depression Rating Scale; HADS=Hospital Anxiety and Depression Scale.

diagnosis of depression (**table 2**). Four nationwide studies on recognition and management of depression in primary care were conducted in the second half of the '90 in Germany (Wittchen et al. 2001, Wittchen et al. 2002), in 5 states of the US (Unutzer et al. 2003) and in Italy (Berardi et al. 2005). These studies involved large representative sample of PCPs and found an antidepressant treatment rate ranging from 41% to 65%. The US study involved elderly subjects suffering from major depression or disthymia (one third of the sample) and found an antidepressant treatment rate of 46%. More recently, Cameron et al. (2009) found in Scotland a 42% of antidepressant treatment rate in patients with a score of 11 or more at Hospital Anxiety and Depression Scale (HADS), which indicates a possible depressive condition. In conclusion, only a proportion of depressed patients received a specific treatment by PCPs.

A more specific and deeper analysis on this topic has been conducted by two methodologically similar studies in Italy (Bellantuono et al. 2002, Balestrieri et al. 2004). The researches provided data on "coverage" of antidepressants, defined as the proportion of depressed patients who would benefit from an antidepressant and who were actually receiving such drug. Subjects with depression who scores more than 13 at the Hamilton Depression Rating Scale (HDRS) are usually considered to be eligible in this category (Paykel et al. 1988). The first study, conducted in two cities of Northern Italy (Mantova e Verona), with the collaboration of 11 GPs found that 39.3% of those who might benefit from an antidepressant treatment received a prescription (Bellantuono et al. 2002). The second study, conducted in five Italian cities, with the collaboration of 25 GPs found a lower value of coverage, 20.9% (Balestrieri et al. 2004).

Antidepressant dosage

Five studies provided information about AD prescription dosage in primary care. SSRIs were used following guidelines and the rate of patients that took a very low therapeutic dosage is estimated about from 0% to 13% (Lawrenson et al. 2000, Balestrieri et al. 2004, Joo et al. 2005). On the contrary, TCAs have a prescribed daily dose consistently lower than those recommended (Mc Manus et al. 2003) and an important rate, between 20% and 72%, of patients treated with TCAs, takes lower dosages than those suggested by guidelines (Lawrenson et al. 2000, Balestrieri et al. 2004). A recent investigation on doxepin found an average of maximum dosage prescribed by PCP equal to 83.2 mg/d (±49.6) and less than 5% of the patients received a standard recommended dosage (Schotte and Linden 2007).

Antidepressant treatment duration

We identified 12 studies providing data about duration of antidepressant treatment in general practice (**table 3**). Of these, nine provide a diagnosis of depression, while 3 studies do not specify the diagnosis for the prescription. All the considered studies provide data about early discontinuation of antidepressant treatment. Only 4, report data about six months duration of treatment that represents the recommended time period for effective treatment with antidepressant.

The identified studies adopted different definitions of *early discontinuation*: single prescription ("no purchase of any type of antidepressant during 6 months following first prescription") (Hansen et al. 2004, Hansen et al. 2007, Van Geffen et al. 2009), within the first 4 weeks of treatment (Demyttenaere et al. 2001a, Moride et al. 2002, Aikens et al. 2005, Joo et al. 2005, Tanno et al. 2009), within the first 6 weeks of treatment (Lawrenson et al. 2000, Lin et al. 2000), or during the acute phase of treatment (3 months) (Pinto-Meza et al. 2008).

Table 3. *Duration of antidepressant treatment*

Author, year	Place	Period	AD classes	Occasional Prescriptions (%)	Still in treatment at 6 months (%)
Lawrenson 2000	UK	1993-96	TCA	66.2	Not reported
			SSRI	60.5	
Lin 2000	USA	1996-98	All	40	Not reported
Demyttenaere 2001	Belgium	2000	All	12	47
Moride 2002*	Canada	1996-97	All	24	54.3
Hansen 2004	Denmark	1998-99	TCA	56.4	Not reported
			SSRI	30.5	
Aikens 2005	USA	1999	SSRI	7.2	Not reported
Joo 2005	USA	2002	All	20	Not reported
Hansen 2007	Denmark	2002-03	All	25.2	Not reported
Hunot 2007	England	2000-02	All	Not reported	41
Pinto-Meza 2008	Spain	2002	All	33	56
Tanno 2009	Japan	2004-08	SSRI	23.9	Not reported
Van Geffen 2009	Netherlands	2001	SSRI**	23.7	Not reported

List of abbreviations: AD=AntiDepressant; SSRIs=Selective Serotonin Reuptake Inhibitors; TCAs=TriCyciclic Antidepressants.

* The sample included only patients aged 65 or more years; ** plus venlafaxine and mirtazapine.

Figure 1. *Study selection - Flow diagram*
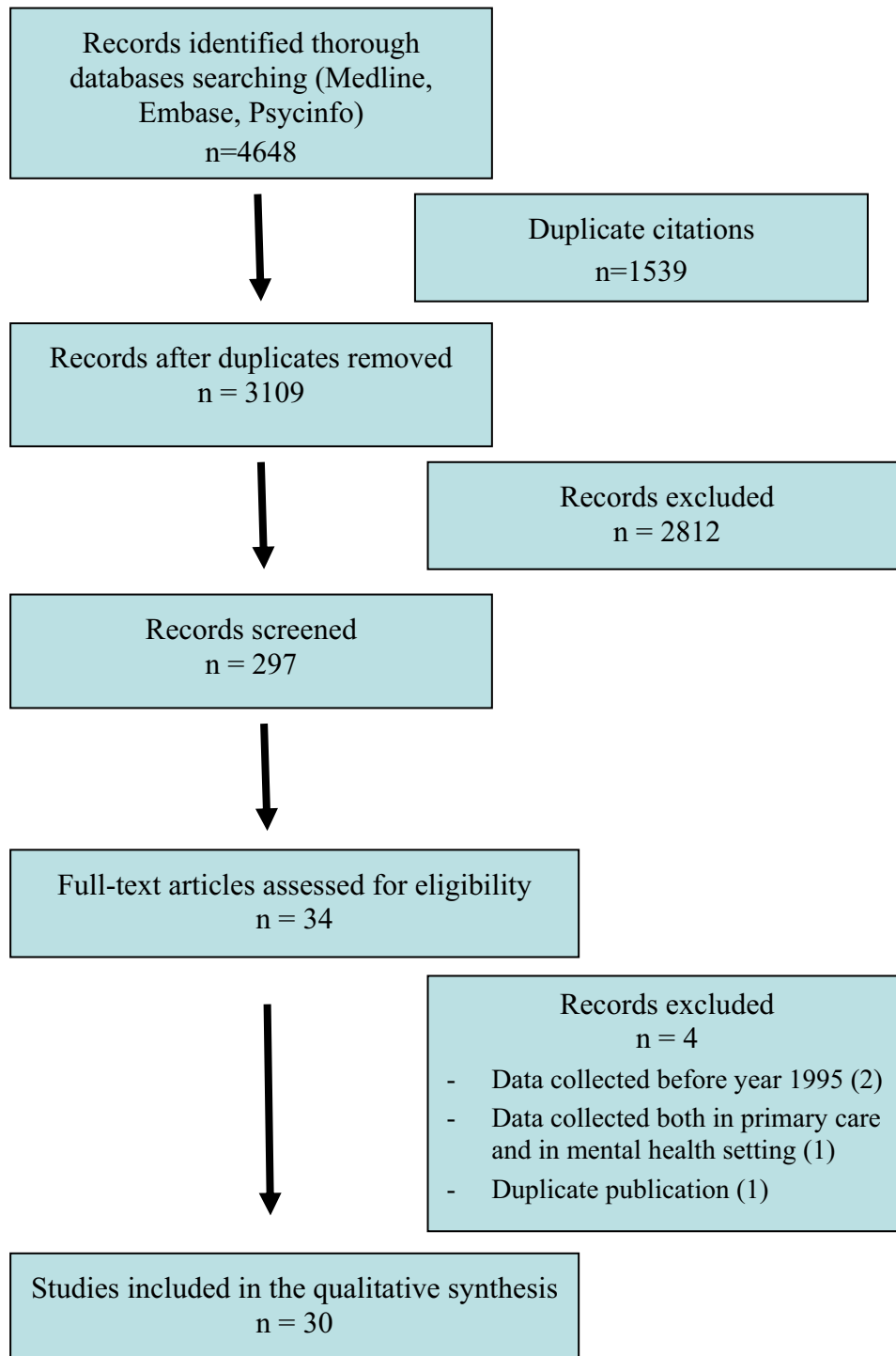
Almost all these definitions are overlapping because a single AD package allows a period of treatment of about 4-6 weeks. The rate of early discontinuation treatment, "occasional prescriptions", differs within the considered studies between 7.2-66.2%. Lawrenson et al. (2000) e Demyttenaere et al. (2001a) found that there is a sharp drop in the percentage of patients receiving a prescription about 1-2 month after treatment initiation.

Some studies identify possible risk factors associated to AD early discontinuation in primary care. The risk factors showed by the studies can be grouped in two categories: PCPs' factors and patients' factors. The PCPs risk factors associated with early discontinuation are related to high prescribing rates of antidepressants (Hansen et al. 2004) or of drugs in general (Hansen et al. 2007), to practice in urban region

and to a proportion of elderly less than 50% among their attendees (Moride et al. 2002). Patients' factors associated to suboptimal duration of AD treatment are related to male gender (Tanno et al. 2009), age over 60 years old (Van Geffen et al. 2009), low socio-economic status (Hansen et al. 2004), first or second generation immigrants from non western countries (Van Geffen et al. 2009), chronic disease (Moride et al. 2002), improvement in functional area as family functioning (Demyttenaere et al. 2001a), prior history of recurrent major depression or dysthymia (Lin et al. 2000), non specific indication for AD (anxious-depressive symptoms, sleep disorder without an explicit clinical diagnosis, migraine). Two independent researches report that patient's beliefs towards AD treatment are strongly associated with early discontinuation, in particular antidepressant scepticism before initiating treatment (Aikens et al. 2005), worry about taking AD, concern about side effects and preference for different treatment (Hunot et al. 2007).

Finally two studies found that early discontinuation is also related to use of TCAs (Hansen et al. 2004, Lawrenson et al. 2000). The availability of psychiatric consultation increases the likelihood of receiving adequate treatment during the acute phase of treatment (Pinto-Meza et al. 2008).

Only four studies provide data about 6 months treatment: overall the rate of discontinuation treatments at 6 months varies between 41.0-63.0% (Demyttenaere et al. 2001a, Moride et al. 2002, Hunot et al. 2007, Pinto-Meza et al. 2008). Different measures have been adopted to collect data about AD treatment continuation at 6 months. Three studies used self-report measures consisted in telephone interview to the patients (Demyttenaere et al. 2001a, Hunot et al. 2007, Pinto-Meza et al. 2008) and one collected data from the pharmaceutical service data base (Moride et al. 2002). Hunot et al. (2007) showing that a proportion of patients continuing with antidepressant at 6 month follow up reported to take drug intermittently (12%). One study presents data on factors associated to treatment continuation to 6 months identifying the following patients' factors: expected pharmacological treatment and attended a psychological intervention (Hunot et al. 2007).

Discussion

Available evidences from the literature show that use of antidepressants, and in particular use of SSRI, in primary care constantly increased in the last decade. Despite the increased use of these drugs, some problems still remain with management of depression in primary care:

1) Only a proportion, ranging from 21% to 65%, of primary care attenders with a research diagnosis of depression receives a specific drug treatment.

2) Many depressed patients beginning an antidepressant discontinue pharmacological treatment before 6 months and often after few weeks.

All considered studies about the extension of AD use in six different countries show, without any doubt, an important rise of AD use in primary care in the last decade. This increase is mainly due to the diffusion of

SSRIs helped by the greater ease of use; so far, 93% of PCPs declares that SSRIs are the first choice treatment for depression (Martin-Agueda et al. 2005). Studies that make a detailed analysis of use of different SSRI molecules show how the use of these different active principles has the tendency to increase without the replacement of old AD with the new ones (Pirraglia et al. 2003). TCAs remained a very small proportion of prescription with respect to SSRIs. These data suggests that a few years ago many of those patients who took SSRIs would not have received ADs. These medications have probably extended the chance to be treated to older patients and those with comorbidity. This trend is surely related to the big pressure made by Drug company marketing campaigns that may have influenced the prescription patterns of the PCPs.

The increased number of AD prescription in primary care seems to be in line with data from pharmaceutical researches (Rosholm et al. 2001, Poluzzi et al. 2004) and from general population (Olfson et al. 2002). Notably, all over the world PCPs are the main AD prescribers while psychiatrists and other specialists prescribe only a small percentage of them (Olfson et al. 2002).

The majority of studies on use did not specify clinical diagnosis of depression. The evidences that ADs are recommended for other diseases, such as anxiety disorders - including panic disorder and obsessive-compulsive disorder -, fibromyalgia, migraine and pain, suggests that using antidepressant drug as a proxy for identifying depressed patients in a prescription database should be done with caution. Nevertheless, PCPs prescribe antidepressants mainly for treating depression (Gardarsdottir et al. 2007). However, an increase does not emerge when assessing the proportion of depressed patients treated with AD in primary care. In almost all the studies more than half of primary care attenders with a research diagnosis of DSM-IV or ICD-10 depression do not receive ADs for its conditions. In particular the proportion of treated cases range from 1/5 to 2/3. To understand these data, we need to make some considerations.

First, we need to consider a bias which is intrinsic in any cross-sectional studies, and that may lead to an under evaluation of antidepressant treatment rate. In fact, especially with patients with moderate depression and recent onset, PCPs may decide to delay the ADs prescription. Some studies has suggested that PCPs can assume a behaviour of watchful waiting (Hyde et al. 2005) and that AD prescription can be frequently made during repeat consultation (van Marwijk et al. 2001).

Moreover, depressive disorders in primary care are, in almost half of cases, moderate and self-limited and according to common orientation they not necessarily need a treatment with AD (NICE 2009). Many of these depressive cases report a score below 13 at HDRS, score underneath which there is no evidence of any difference between treatment with AD and placebo (Paykel et al. 1988). In addition, studies about outcome of depression in primary care often do not show differences between treated and recognised cases and not recognised cases (Goldberg et al. 1998). This is an evidence of self remission. It does not seem to be necessary to treat with medications all cases of depression in primary care and so we do not have to

expect 100% of depressed pharmacologically treated. We also need to consider that in psychiatric setting where depressions are more severe, the rate of Major Depression Disease (MDD) treatment is around 70% (Mojtabai 1999).

Although in the past, dosage of AD treatment represented a problem, today prescriptions seem to be more suitable. This is basically due to two reasons related to commercialization of SSRI: SSRI dosage does no longer need to be adjusted by doctors since they are already packed in pills and capsules with minimum effective therapeutic dosage; side effects and adverse reactions are better tolerated than those rising from the treatment with TCAs and are not dose dependent. Another confirmation is the under dosage of TCAs, even in most recent evaluations. On the other side, some evidence (Furukawa et al. 2002), in depression treatment in primary care suggests that the issue of inappropriate TCA dosage needs to be approached differently from the past. Criticism about PCPs common habit of prescribing low dose TCA needs to be reviewed. Low dosage could be a reasonable and appropriate choice, especially in low-moderate grade depression treatments, proper of PC setting. Further a recent study found no differences between PCPs and psychiatrists with respect to preferred dosages of TCAs used for the outpatients' treatment (Schotte et al. 2007). Authors suggest that low dosages could be not a general but a distinct treatment strategy.

Today the rising issue of depression treatment duration is still a problem. A consistent share of patients take ADs in an occasional way, receiving only one prescription enough for a six weeks treatment. It is possible to hypothesize some explanations for this phenomenon:

1) as previously remarked, the majority of depressive syndromes in primary care is mild. In these cases with good prognosis the syndrome has the tendency to recover spontaneously and in a short period of time. So patients who feel better might consider therapy no longer necessary and therefore decide to interrupt it. The "feeling better" is in fact one of the most reported reasons to a premature AD treatment interruption (Demyttenaere et al. 2001b). This hypothesis seems to be supported by some evidence: the consistent AD rate prescribed to subjects without a depression diagnosis (false positive) (Bellantuono et al. 2002, Unutzer et al. 2003, Balestrieri et al. 2004) and the increased risk of premature drop out when prescription is made by a PCP that has tendency to over prescribe AD (Hansen et al. 2004).

2) Patients' preferences in the treatment of depression are important in clinical practice because they can influence the adherence to drug treatment. A review (Van Schaik et al. 2003), suggests that antidepressants were often regarded as addictive and at the same time, psychotherapy was assumed to solve the cause of depression. It seems that depressed patient in PC prefer psychotherapy, which is often not available in primary care. A recent study reports the presence of a strong association between the initial patient attitude toward AD medicine and the risk of an early treatment interruption: patient's nihilism about the pertinence of taking ADs, results to be a predictive factor in early interruption (Aikens et al. 2005, Hunot et al. 2007).

3) Sporadic use of antidepressants might be related to the latency period of AD effects and side effects. Even if the SSRIs are better than TCAs they still have initial and temporary side effects in 20-25% of patients. A 2001 study seems to support this thesis showing that the "no effect" and "side effects" factors reported by patients are related to early AD treatment discontinuation (before 2 months) (Demyttenaere et al. 2001b). This phenomenon is stressed in primary care by the insufficient time available for consultation, not enough to allow PCP to give a complete and detailed explanation of therapeutic and unwanted AD effects.

4) High rate of early discontinuation can also be related to the lack of adequate number of follow up visits. Some studies suggest that patients treated in primary care did not receive guideline concordant follow up visits (Pinto-Meza et al. 2008, Chen et al. 2010). The acute phase of antidepressant treatment is a critical period for the possible presence of side effects. The lack of recommended follow up contacts with the prescribing physician during the first AD treatment period associated to the presence of side effects, could influence the patients' decision about drug interruption.

Two seem to be major and most alarming consequences to short AD treatment duration. The first one is related to patients' health. As assumed there is a latency period of 1-4 weeks before ADs could be appreciated. This means that an AD treatment lasting less than one month does not guarantee complete symptoms remission and is also associated to relapses risk (Melfi et al. 1998). In addition, occasional prescriptions phenomenon has an important economical effect: since 60% of prescriptions are sporadic, associated to a low, when none, clinical effect a large part of health expenses for ADs could be limited (Poluzzi et al. 2004).

Studies addressed to risk factors of early discontinuation found several and heterogeneous findings. However, two groups of related factors seem to be common: vulnerability for AD discontinuation is increased in patients with social problems (old people, migrants, low social-economical level, chronic disease) and in those reporting a negative attitude towards AD treatment (scepticism before initiating treatment, worry about taking AD, concern about side effects).

Only a part of patients continue AD treatment to 6 months and a minority (12% of the sample who completed the study) assumed AD intermittently (Hunot et al. 2007). No other studies address specifically to factors associated with treatment continuation. Considering risk factors for early discontinuation, it is possible to hypothesize that the absence of these factors might increase the probability that antidepressants would be continued for at least 6 months with a continuous assumption as suggested by clinical guidelines.

In conclusion, data presented in this review seem to demonstrate an increased appropriateness in depression treatment in primary care. New generation of ADs have favoured treatment of depression for physicians not specialized in mental health. So far, a larger rate of patients with major depression is being treated in primary care, compared to the past. The treatment rates (between 40% to 65%), driven from the literature can be considered as satisfying, considering that

in primary care depressive disorders are often mild and self limited. An important problem remains: many patients who decide to interrupt treatment are at risk of relapse. PCPs should be aware of this phenomenon and provide follow up visits with psychoeducation about drugs and their side effects. Future educational interventions for the PCPs should be organized on these issues.

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