

Early experiences with Suboxone maintenance therapy in Hungary

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Background: Suboxone (Buprenorphine/naloxone) is a novel drug used in opiate substitution therapy. In Hungary, it was introduced in November 2007. Suboxone is a product for sublingual administration containing the partial μ -receptor agonist buprenorphine and antagonist naloxone in a 4:1 ratio. **Objective:** Objectives of our study were to monitor and evaluate the effects of Suboxone treatment. **Method:** 6 outpatient centers participated in the study, ; 3 from Budapest and 3 from smaller cities in Hungary. At these centers, all patients entering Suboxone maintenance therapy between November 2007 and March 2008, altogether 80 persons (55 males, 35 females, mean age = 30,2 years, SD=5,48) were included in the study sample. During the 6-month period of treatment, data were collected 4 times; when entering treatment, 1 month, 3 months, and 6 months after entering treatment. Applied measures were the Addiction Severity Index, SCID-I, SCID-II, Hamilton Depression Scale, Hamilton Anxiety Scale, STAI-S State Anxiety Inventory, Beck Depression Inventory, Heroin Craving Questionnaire, WHO Well-being Inventory, Perceived Stress Scale, ADHD retrospective questionnaire, TCI short version, and Ways of Coping questionnaire. **Results:** Nearly fourth of the altogether 80 heroin dependent patients (18 persons, 22.5%) dropped out of treatment during the first month (the majority, 12 persons [15%] during the first week) or chose methadone substitution instead. Following this period however, dropout rate decreased and the six-month treatment period was completed by 32 patients (40%). During the first month of treatment significant positive changes were experienced in all studied psychological and behavioral dimensions that proved to be stable throughout the studied period. **Conclusions:** According to the early experience with Suboxone treatment, it is a well tolerable and successfully applicable drug in the substitution therapy of opiate addicts. A critical phase seems to be the first one or two weeks of treatment. Dropout rate is high during this early period, while after a successful conversion clients presumably remain in therapy for a long period. At the beginning of administration special emphasis must be put on informing patients, especially concerning withdrawal symptoms that might be present during the first week, which highly contributes to better retention in treatment.

Keywords: Suboxone, buprenorphine, naloxone, heroin substitution, maintenance therapy, effectiveness, Hungary

Out of all drug patients entering treatment in Hungary in 2008, 17% used opiates, typically injected heroin (Hungarian National Focal Point, 2009). The aim of agonist maintenance treatments is to reduce public health risks related to intravenous heroin use; infections (mainly HIV and hepatitis C), criminality, overdose and to increase life quality, physical and mental health of patients (World Health Organization, 2009). Besides the widespread methadone maintenance treatment in Hungary (677 patients received such treatment in 2008; Hungarian National Focal Point, 2009), in 2007 the need arose for the introduction of a sublingual product (Suboxone) containing buprenorphine and naloxone in a 4:1 ratio. The reasons were its clinical advantages compared to methadone due to its favorable characteristics when applied in treatment; less euphoric and sedative effects, good tolerability, no unwanted side effects (overdose) (Amass et al., 2004; Kakko et al., 2007; Kleber, 2007; Orman & Keating, 2009a, 2009b), and that intravenous heroin use significantly decreases during the maintenance treatment (Mammen & Bell, 2009). This product, due to the elongated partial agonist effect of buprenorphine can be administered every second day, and due to the antagonistic component Naloxone, weekly dosage can be handed out to the patients, thus the number of doctor-patient encounters can be reduced. Based on these facts Suboxone is suggested to be the first choice drug in opiate substitution treatment (Kakko et al., 2007; Law, Myles, Daglish, & Nutt, 2004; Whitley, Kunins, Arnsten, & Gourevitch, 2007). Suboxone, besides its application in substitution maintenance programs, is effectively adaptable in the preparation of patients for abstinence-oriented programs, hence effectively applicable for the aim of detoxification as well (Amass et al., 2004; Johnson & McCagh, 2000; Van den Brink & Haasen, 2006). For the abovementioned characteristics, Suboxone is also suggested to be a first choice drug in maintenance treatment or detoxification carried out in detention centers.

At the same time, there are only a few studies on the efficacy of Suboxone treatment even in the international scope. Objectives of our study were monitoring and evaluating the effect of Suboxone treatment parallel with the introduction of the product in Hungary. Besides exploring dropout ratio and the dimensions having an influence on it, we also intended to study the changes occurring in the course of treatment.

METHODS

Sample

All opiate dependent patients entering Suboxone maintenance treatment therapy between November 2007 and March 2008 in Hungary were included in the study sample. Suboxone therapy was provided at six treatment centers during this period:

1. Nyíró Gyula Hospital Drug Outpatient and Prevention Center, Budapest
2. Soroksár Addiction Treatment Center, Budapest
3. Blue Point Drug Counseling and Outpatient Center, Budapest
4. INDIT Foundation Baranya County Drug Outpatient Center, Pécs
5. BMKT Pándy K. Hospital, Drug Outpatient Center, Gyula
6. Dr. Farkasinszky Terézia Drug Outpatient Center, Szeged

During the study period 80 opiate dependent patients were involved in Suboxone treatment. Before entering treatment, all clients received detailed information on Suboxone therapy. 68.8% (55 persons) of the study sample were male, while 31.2% (25 persons) were female. Mean age was 30.2 years (sd=5.48 years, between 18-45 years).

Treatment protocol

Treatment was carried out according to the guidelines of the Suboxone Therapy Protocol. The appropriate dose and dosage was defined by the doctors responsible for the treatment, these parameters were not influenced by the present study. The applied dosage was between 6 and 32 mg (mean dose: 19.3 mg; SD=5.3 mg) however, most of the clients (87.5%) received 16-24 mg buprenorphine per day. During the first 30 days of treatment patients were obliged to attend the treatment centers daily. For two weeks after the first month visits on every second or third day, while following this period weekly visits were required from the patients.

Measures

During the study, besides the necessary laboratory examinations, HIV and HCV tests, we have assessed the severity of addiction, prevalence of comorbid psychiatric disorders and other parameters regarding the patients' psychosocial status.

Addiction severity

Extent of dependence was measured with the Addiction Severity Index (ASI). Hungarian experiences with the measure of McLellan and colleagues (McLellan et al., 1992) show satisfactory results concerning validity and reliability of the applied measure (Gerevich, Bacskai, Ko, & Rozsa, 2005; Rácz, Pogány, & Máthé-Árvay, 2002).

Psychiatric comorbidity

The Structured Clinical Interview for DSM-IV axis I disorders (SCID-I; First, Spitzer, Gibbon, & Williams, 1997) and axis II disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997) were applied for the exploration of the psychiatric status of the patients.

Studied personality dimensions

Temperament and character dimensions of patients were assessed by the short, 65-item Hungarian version (Rózsa, Kállai, Osváth, & Bánki, 2005) of the Cloninger Temperament and Character Inventory (Cloninger, Przybeck, Svrakic, & Wetzel, 1994). Coping characteristics were measured by the Ways of Coping questionnaire (WOC) created by Folkman and Lazarus (Folkman & Lazarus, 1988; Rózsa et al., 2008). Also one retrospective questionnaire exploring childhood ADHD was applied (DuPaul, Power, Anastopoulos, & Reid, 1998; Faries, Yalcin, Harder, & Heiligenstein, 2001; Perczel Forintos, Kiss, & Ajtay, 2005).

Craving

The extent of craving was assessed by the Heroin Craving Questionnaire of Tiffany et al. (Schuster, Greenwald, Johanson, & Heishman, 1995; Tiffany, Fields, Singleton, Haertzen, & Henningfield, 1995). The scale consists of five subscales; (1) Desire to Use Heroin; (2) Intentions and Plans to Use Heroin; (3) Anticipation of Positive Outcome; (4) Relief from Withdrawal or Dysphoria; (5) Lack of Control over Use. Reliability indices of the scale are satisfactory (Cronbach's α for the entire scale is .962; while for the subscales: .907; .892; .857; .782; and .815 respectively).

Actual mental status

Depression. Two scales were applied for the assessment of depressive symptoms. One was the Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) showing good reliability and validity on a greater Hungarian sample (Rózsa, Szádóczy, & Füredi, 2001) and on our present sample as well.

The other measure used was the Hungarian version of Hamilton Depression Scale (HAM-D) (Hamilton, 1967; Perczel Forintos et al., 2005) that was applied by the doctor responsible for treatment. The most frequently used, 17-item scale was applied, measuring a single dimension. In former studies the scale proved to be valid and reliable (Rózsa, Szádóczy, Schmidt, & Füredi, 2003), as well as in case of the present sample (Cronbach's α = 0.831).

Anxiety. Two measures were applied for the assessment of anxiety. One was the 20-item State Trait Anxiety Inventory (STAI-S) (Spielberger, Gorsuch, & Lushene, 1970) whose Hungarian version (Sipos, Sipos, & Spielberger, 1988), in accordance with the former experiences, had satisfactory reliability characteristics on the present sample as well (Cronbach's α = 0.928). The other measure was the Hungarian version of the 14-item Hamilton Anxiety Scale (HAM-A) (Hamilton, 1959; Perczel Forintos et al., 2005). The interview was conducted by the treatment physician. The scale has good reliability (Cronbach's α = 0.901).

Well-being. The short version of the WHO well-being questionnaire was applied (Bech, Gudex, & Johansen, 1996; Susánszky, Konkoly Thege, Stauder, & Kopp, 2006). Reliability of the scale is satisfactory (Cronbach's α = 0.782).

Perceived stress. The Perceived Stress Scale (PSS) of Cohen and colleagues (Cohen, Kamarck, & Mermelstein, 1983) was applied to determine the level of stress of the patients. The scale has satisfactory reliability and validity indices in Hungarian samples (Stauder & Konkoly Thege, 2006), as well as in the sample of the present study.

Procedure

Changes in the measured dimensions during treatment were studied in a prospective design.

During the 6-month period of treatment, data on clients were collected 4 times; right before entering treatment (T_0), 1 month (T_1) and 3 months (T_2) after entering treatment, and finally at the end of the therapy, thus 6 months after entering treatment (T_3). Table 1. shows points of data collection and the applied measures at specific points. Patients entering Suboxone maintenance treatment therapy between November 2007 and March 2008 became part of the study sample. Regarding the 6-month follow-up period, data collection ended on 30th October, 2008.

Table 1. Study Protocol

Points of data collection	1. (T ₀)	2. (T ₁)	3. (T ₂)	4. 1. (T ₃)
measured parameters	T ₀	T ₀ + 1 month	T ₀ + 3 months	T ₀ + 6 months
weight	x	x	x	x
height	x			
laboratory urine testing	x			
HIV testing	x			
Hepatitis C testing	x			
Addiction Severity Index (ASI)	x	x	x	x
SCID-I	x			x
SCID-II	x			
depression (HAM-D)	x	x	x	x
anxiety (HAM-A)	x	x	x	x
state anxiety (STAI-S)	x	x	x	x
depression (BDI)	x	x	x	x
craving (HCQ)	x	x	x	x
Well-being (WHO)	x	x	x	x
Perceived Stress (PSS)	x	x	x	x
ADHD-RS	x			
TCI	x			x
coping (WOC)	x			x

RESULTS

In the study period 80 opiate dependent persons entered Suboxone therapy in one of the six treatment centers. 18 persons (22.5%) dropped out of treatment within one month, while 13 persons (16.3%) remained in treatment from 1 to 3, and another 17 persons (21.3%) from 3 to 6 months in treatment. Altogether 40% (32 persons) finished the six-month treatment. Highest dropout rate was present in the first week; 12 persons (15%) left the treatment during this period.

Changes in the specific dimensions were analyzed by means of paired sample t-tests, by comparing the mean values of consecutive points of data collection. In all seven profiles of ASI a favorable transition could be observed after the first month of treatment.

This improvement, except for Employment/Support Status (where a positive tendency was present), was significant in all cases. In the following five months of treatment however, no further significant changes occurred. The exception again is the Employment/Support Status, where a significant improvement was found between the last two points of data collection (Table 2).

Regarding the studied mood dimensions, stress and anxiety, results were similar to those measured in case of ASI dimensions (Table 3). There was a significant improvement in all assessed dimensions during the first month of treatment ($p < 0.001$), while in the following months, no significant transition was observed; the status characteristic of the end of the first month was stabilized. The only exception was the Somatic disorder

Table 2. Means and standard deviations of specific ASI dimensions, and changes between points of data collection

	T ₀		T ₁		T ₂		T ₃
	N ₀	N ₁	N ₁	N ₂	N ₂	N ₃	N ₃
Medical	1.00 (1.41)	1.81 (1.41)	1.06 (1.41)	1.00 (1.41)	1.24 (1.41)	1.48 (1.41)	1.09 (1.41)
t		3.561***		-1.121		1.569	
Employment / Support Status	2.07 (1.98)	2.42 (1.77)	1.92 (1.70)	1.83 (1.53)	1.74 (1.42)	2.04 (1.46)	1.35 (1.64)
t		1.934 [#]		0.550		2.075*	
Alcohol	0.21 (0.58)	0.70 (1.62)	0.36 (0.83)	0.45 (0.92)	0.38 (0.91)	0.22 (0.52)	0.22 (0.52)
t		2.343*		0.829		0.000	
Drugs	4.86 (2.14)	6.26 (1.73)	1.77 (1.71)	1.76 (1.79)	1.45 (1.95)	1.26 (1.45)	1.04 (1.46)
t		14.421***		1.362		1.311	
Legal	1.36 (1.39)	2.36 (1.80)	1.30 (1.38)	1.26 (1.38)	1.12 (1.76)	0.87 (1.98)	0.70 (1.22)
t		4.374***		0.614		0.463	
Family /Social	3.00 (1.30)	3.11 (1.82)	1.94 (1.55)	1.81 (1.38)	1.76 (1.56)	1.39 (1.41)	1.87 (1.82)
t		4.164***		0.236		-1.046	
Psychiatric	2.71 (1.82)	3.73 (1.86)	2.71 (1.46)	2.63 (1.33)	2.48 (1.83)	2.09 (1.62)	2.30 (1.15)
t		4.518***		0.557		-0.755	

N₀=14, N₁=53, N₂=42, N₃=23; [#] = p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

subscale of the Beck Depression Inventory, where a tendency of improvement was measured between the last two points of data collection as well.

Similarly, there was a significant improvement in the well-being dimension during the first month and no further changes occurred in the following months.

Dimension of craving showed a pattern similar to the abovementioned dimensions. The total scores of the scale, like all of its subscales indicated significant (p<0.001) decrease in craving during the first month, while no further changes occurred in the course of treatment (Table 4).

Factors possibly influencing retention in treatment were introduced to a stepwise method linear regression analysis. Number of weeks in treatment was considered to be the outcome variable while values of all measured dimensions at the point of entering treatment were included as potential predictor variables. As a result of the analysis three variables remained in the model. Retention in treatment is best predicted by higher perceived stress on the PSS

($\beta = 0.335$; p=0.008), lower childhood hyperactivity ($\beta = -0.339$; p=0.009), and less favorable legal status assessed with ASI ($\beta = 0.264$; p=0.040). Model explains 24.7% variance (Adjusted R²= 0.203) of the outcome variable (number of weeks in treatment).

DISCUSSION

In the course of the present study 80 opiate dependent persons entered Suboxone treatment. Altogether 40% (32 persons) have finished the six-month treatment. After one month, in almost all studied psychological and psychosocial characteristics positive changes were experienced (except for the Employment/Support dimension of the ASI, where primarily only a tendency of improvement could be observed, but during later phases of treatment a significant improvement was measured). Predictors of retention in treatment were a higher level of perceived stress, lower childhood hyperactivity and more legal problems. Our further analyses suggest that initial higher stress level is

Table 3. Mean values and standard deviations of specific mood, anxiety, stress and well-being dimensions, and changes between different points of data collection

	T ₀		T ₁		T ₂		T ₃
	N ₀	N ₁	N ₁	N ₂	N ₂	N ₃	N ₃
N	15	61		46		29	
Anxiety (Hamilton)	19.2 (9.97)	20.7 (10.28)	12.8 (8.82)	12.1 (6.33)	11.7 (8.91)	11.3 (8.71)	11.2 (8.25)
t		7.784***		1.295		0.103	
N	16	61		49		31	
Anxiety (STAI-S)	55.8 (12.21)	56.9 (11.23)	47.5 (13.32)	48.7 (12.87)	48.0 (13.96)	46.7 (14.75)	47.1 (12.84)
t		5.433***		0.489		-0.233	
N	15	60		46		28	
Depression (Hamilton)	13.9 (6.96)	15.7 (7.43)	9.8 (6.34)	9.8 (6.02)	8.5 (6.64)	8.5 (7.48)	8.4 (6.96)
t		7.178***		1.522		0.095	
N	15	62		49		31	
Depression (BDI-Total)	20.9 (10.23)	26.7 (11.67)	15.0 (11.11)	15.6 (11.50)	14.3 (11.88)	15.2 (12.71)	13.4 (11.91)
t		8.366***		1.123		1.085	
BDI Negative Mood	9.9 (6.14)	12.1 (5.95)	6.8 (5.77)	7.3 (5.93)	6.5 (6.14)	7.2 (6.91)	6.3 (6.44)
t		7.034***		1.241		1.036	
BDI Achievement Dis.	7.1 (3.56)	9.1 (4.61)	5.3 (4.42)	5.4 (4.60)	4.8 (4.35)	4.9 (4.52)	4.8 (4.64)
t		7.430***		1.243		0.144	
BDI Somatic Disorder	3.9 (2.15)	5.5 (2.45)	2.9 (2.31)	3.0 (2.36)	3.0 (2.67)	3.1 (2.53)	2.4 (2.06)
t		6.791***		-0.071		1.847 [#]	
N	16	61		49		31	
Perceived Stress (PSS)	30.6 (6.46)	32.7 (8.51)	26.1 (8.64)	26.9 (8.12)	25.1 (10.13)	23.9 (11.0)	24.1 (9.98)
t		5.705***		1.61		-0.114	
N	16	62		49		31	
Well-being	4.1 (2.96)	4.6 (2.76)	7.7 (3.34)	7.6 (3.37)	7.3 (3.43)	7.4 (3.84)	7.5 (3.68)
t		-7.094***		0.634		-0.06	

[#] = p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

also in tight connection with depressive symptoms, however, depression did not appear in the model as a predictor variable because its effect was mediated by the perceived stress. The relationship between stress, depression and opiate dependency is well known

(Strain, 2002), just as the tendency of decreasing depressive symptoms in the course of maintenance treatment (Nunes, Sullivan, & Levin, 2004).

Results might also imply that retention can be increased by means of psychosocial interventions,

Table 4. Means and standard deviations of craving dimensions, and changes between points of data collection

	T ₀		T ₁		T ₂		T ₃
	N ₀	N ₁	N ₁	N ₂	N ₂	N ₃	N ₃
N	16	61		49		30	
Heroin Craving (Σ)	210.4(63.03)	196.0(61.69)	99.5 (56.41)	97.0 (54.40)	93.1 (50.28)	90.2 (45.11)	93.8 (46.86)
T		10.130***		0.517		-0.614	
Desire to use heroin	39.9 (17.33)	34.5 (15.32)	15.7 (11.21)	15.1 (10.79)	14.0 (10.54)	13.9 (10.52)	15.0 (9.22)
t		8.215***		0.693		-0.863	
Intentions & plans	36.9 (13.33)	36.6 (14.77)	16.4 (11.81)	15.9 (11.53)	14.8 (9.07)	14.0 (8.72)	15.3 (9.26)
t		9.089***		0.704		-0.948	
Anticip. of pos. outc.	44.4 (15.17)	39.8 (13.72)	20.3 (12.94)	19.1 (12.11)	18.8 (12.98)	17.8 (11.63)	20.0 (10.60)
T		9.550***		0.183		-1.26	
Relief from withdr.	48.9 (12.47)	45.4 (11.57)	25.6 (12.29)	25.8 (12.20)	24.8 (13.58)	23.8 (11.33)	22.4 (10.98)
t		11.129***		0.502		0.95	
Lack of control	40.4 (13.84)	39.7 (12.76)	21.5 (13.61)	21.0 (13.17)	20.7 (10.98)	20.8 (10.30)	21.1 (11.80)
t		8.286***		0.16		-0.197	

= $p < 0.1$, * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$

though this statement is not supported by a Cochrane-review (Amato et al., 2008). At the same time, however, in the literature reviewed by Amato and colleagues (2008), treatment of the 'control' group always involved 'routine' counseling besides maintenance medication (and the 'intervention' group received further psychosocial intervention). This and WHO guidelines (2009) suggest that patients should receive at least minimal psychosocial support accompanying pharmacological therapy. Our results suggest that intervention might be especially important after the large-scale improvement in the psychological dimensions during the first month, which dimensions, however, are not expected to change significantly afterwards.

When summarizing our experiences, we emphasize the promising results of Suboxone treatment, while at the same time we highlight the 60% dropout rate of patients, in case of whom other types of treatment, for example methadone maintenance treatment or abstinence-oriented therapy, should be applied (Kakko et al., 2007;

Kleber, 2007; Whitley et al., 2007). Furthermore, it must be underlined that 37.5% (18 persons) of the altogether 48 patients characterized by early exit from treatment (before six months) dropped out in the first month of therapy, the majority of them (12 persons) in the first week. This result inevitably shows that the initial period, the first one or two weeks of Suboxone treatment, is a critical phase for patients. During this interval presence of withdrawal symptoms of various extent can be expected for the reason that buprenorphine, characterized by a stronger μ -opiate receptor affinity, gradually expels heroin from the binding sites, while at the same time, due to its partial agonist effect, withdrawal symptoms cannot be totally eliminated. Appropriate support provided for the patients, thorough information on the unpleasant symptoms and especially on their transient nature, seems to be crucial in helping patients through this critical phase and thus in increasing the probability of long-term retention in treatment.

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Fenntartó Suboxone terápiával szerzett kezdeti tapasztalatok

Háttér: A Suboxone (buprenorphine/naloxon kombinált készítmény) új, az opiátfüggők szubsztitúciós terápiája során alkalmazható szer, amely Magyarországon 2007 novemberében került bevezetésre. A sublingualisan alkalmazandó gyógyszer, parciális μ -receptor agonista buprenorphine-t, valamint μ -receptor antagonistá nalo xont tartalmaz; 4:1 arányban. **Célkitűzés:** Vizsgálatunk célja a Suboxone hazai bevezetését követően a szer alkalmazásának monitorozása, hatékonyságának elemzése volt. **Módszer:** A vizsgálatban három budapesti és három vidéki drogambulancia vett részt. Ezeken a kezelőhelyeken valamennyi, 2007 novemberre és 2008 márciusa között Suboxone fenntartó kezelésre terápiába vett kliens, összesen 80 fő (55 férfi és 35 nő, átlagéletkor 30 év, SD=5 év) bekerült a vizsgálati mintába. A kezelés hat hónapos időtartama alatt négy alkalommal történt adatfelvétel: a kezelésbe kerüléskor, illetve egy hónappal, három hónappal és hat hónappal a kezelés megkezdését követően. Alkalmazott mérőeszközök: Addikció Súlyossági Index, SCID-I, SCID-II, Hamilton Depresszió Skála, Hamilton Szorongás Skála, STAI-S Állapot Szorongás Kérdőív, Beck depresszió kérdőív, Heroin Sóvárgás Kérdőív, WHO Jól-lét kérdőív, Észlelt Stressz kérdőív, ADHD retrospektív kérdőív, TCI rövidített változata, a Megküzdés Módjai kérdőív. **Eredmények:** Az összesen kezelésbe vont 80 heroinfüggő személy közel negyede (18 fő; 22,5%) egy hónapon belül (többségük, 12 fő [15%] egy héten belül) esett ki a kezelésből, illetve tért át metadon szubsztitúcióra. Ezt követően azonban csökkent a kiesések száma. A hat hónapos vizsgálati periódust 32 fő (40%) fejezte be. A kezelés első hónapja során valamennyi vizsgált pszichológiai és viselkedési dimenzióban szignifikáns pozitív irányú változást tapasztaltunk, ami a későbbiek során is fennmaradt. **Következtetések:** A Suboxone-nal szerzett kezdeti tapasztalatok szerint a gyógyszer jól tolerálható és opiátfüggők szubsztitúciós terápiájában sikeresen alkalmazható. A kezelés kritikus időszakának az első egy-két hét tűnik; a kiesések aránya ebben az időszakban magas, a sikeres átállást követően azonban várható a hosszú távú kezelésben maradás. A kezelésbevétele t követően kiemelt figyelmet kell fordítani a beteg tájékoztatására különös tekintettel az első egy hétben megjelenő elvonási tünetek vonatkozásában, ami nagyban hozzájárulhat a sikeres kezelésben tartáshoz.

Kulcsszavak: Suboxone, buprenorphine, naloxon, heroin szubsztitúció, fenntartó kezelés, hatékonyság, Magyarország