Assessment of attitudes towards the use of topical corticosteroids among patients, prescribers and pharmacists in the Republic of Macedonia

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Abstract

Apart from the time-proven, gold standard treatment of many topical conditions with corticosteroids, the phobia of using topical corticosteroids (TCs) is a phenomenon unveiled among groups of patients, parents, as well as health professionals. Health professionals' attitude to TCs could have a significant impact on the trend of TCs-phobia among patients. Therefore, it is essential to address this issue as TCs-phobia is something which could also have important implications in medication adherence and compliance to prescribed treatment.

Bearing in mind that no survey had been conducted to investigate this matter in Republic of Macedonia (RM), a self-completed questionnaire has been created to assess attitudes and their prevalence associated with TCs-phobia among patients and health professionals with aim to describe the attitude, explore the reasons behind revealed phenomenon and define directions for future interventions needed to advance the healthcare in this field.

Our findings show that the TCs-phobia is present among surveyed population (21.6 and 34.22% of all responders expressed negative attitudes or fear of TCs use, respectively). It is also concluded that ~27% of patients on TCs-therapy admitted that they feared of using the medication. However, there is a higher frequency of negative attitudes regarding the use of TCs among the health professionals (~39%) than among patients, where the TCs-phobia is more prominent among non-dermatologists than dermatologists. Moreover, negative attitude and fear of TCs use is universal among paediatricians (73.91%).

Portrayed interventions needed to identify and manage the TCs-phobia can lead to improvement of adherence and predicted responsiveness of TCs-therapy.

Keywords: topical corticosteroids, corticophobia, survey

Introduction

For more than six decades, topical corticosteroids (TCs) have been proven to create a main stay of medical treatment for many dermatologic conditions due to their anti-inflammatory, vasoconstrictive and immunomodulatory effects (Balkrishnan et al., 2005; Cornell and Stough-

ton, 1985; Ference and Last, 2009; Haber, 2010; Katz et al., 1987; Miller and Munro, 1980; Roos et al., 2004; Tadiccherla et al., 2009).

Since the synthesis of hydrocortisone in 1951 to present, an increasing number of TCs pharmaceuticals available in various topical dosage forms (e.g. solutions, lotions, creams, ointments, gels, sprays and mousses) with different strengths are placed on the global market. A com-

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mon rule is to use ointments on dry skin and creams on wet areas. Furthermore, several high-potency TCs are available with salicylic acid or combined with other drug substances (for example, antibiotics or antifungals) (Alston et al., 2003). However, in continuum, the greatest challenge for the scientists is the development of more potent corticosteroid drug molecules with reduced risks of side-effects (Hengge et al., 2006; Leung and Barber, 2003; Mason et al., 2002). As acknowledged, TCs can be classified according to their potency and pharmaceutical vehicles. TCs may differ in potency based on the vehicle or concentration which affects their absorption and efficacy. The potency is determined by the amount of vasoconstriction a TC produces and the degree to which it suppress the inflammatory pathways (Jacob and Steele, 2006). Nevertheless, similar vasoconstricting ability does not indicate therapeutic equivalence (Kanfer, 2010; Menter et al., 2008). According to the present systems of TCs potency, it is obvious that classification can vary depending on the source (NPF, <http://www.resourceclinical.com>). In general, TCs are classified into four groups by potency – mild, moderate, potent and very potent. Thus, the World Health Organization Classification of TCs also includes four classes consisting of seven groups in total (Ultra High Potency Class with Group I, High Potency Class with Group II and III, Moderate Potency Class with Group IV and Low Potency Class with Group VI and VII) (Bologna et al., 2012), whereas the USA classification of TCs is based upon the potency and ranges from Class 1 (the ultra-high) to Class 7 (the least potent). It is important to note that classifications are based on a finished pharmaceutical product, and not only on a specific corticosteroid molecule.

In considering prescriber's opinion, it is recommended that the lowest potency TCs should be used as first line treatment option to control the skin condition. Nevertheless, it is appropriate to use a very high potent TC for a short period of time because of the potential for systemic side effects (Menter et al., 2009; National Guideline). However, for successful TC treatment and therapy outcomes, two aspects have to be considered: the first is related to the decision-making process and prescribing pattern for TCs of choice and the second is focused on the patient adherence and compliance with the prescribed TC therapy. In more details, influential factors include: patient's age, type of skin condition or lesion of the affected area, clinical presentation and severity of condition, accurate diagnosis, choice of optimal dosage, the anatomical site of application, frequency of administration, duration of treatment and side effects (Lee and Marks, 1998; Pariser, 1991). In addition, the potential for irritation or allergy also influences the selection of TC (Haeck et al., 2009; Torres and Cantor, 2010).

Without any concerns, the efficacy and safety of TC treatment have been clearly established and confirmed. Thus, numerous studies, clinical practices and guidelines have shown that these medicinal molecules still remain to

be the first-line and/or the gold standard for treatment of chronic relapsing skin conditions such as atopic and contact dermatitis, eczema, psoriasis, lichen etc., when patients used them appropriately, according to the regime and advice given by healthcare professionals (doctors and pharmacists) (Ashcroft et al., 2000; Bewley, 2008; Drake et al., 1996; Renaud-Vilmer et al., 2004; Saeki et al., 2009).

TCs are safe and effective if used appropriately. Patient's adherence to the therapy is another significant factor for their success. Therefore, as mentioned above, the quality patient education and support about the appropriate use of TCs are crucial for the compliance, with a special focus on TCs when used as part of a complex treatment regimen. Despite the long history of TCs effectiveness, the best practices for choosing TC to safely and effectively treat patients conditions and the great progress accomplished in TC pharmaceuticals, the use of TCs is still largely constrained by the emotional concerns (usually called 'TC phobia') present in a substantial number of patients, parents and healthcare professionals. Furthermore, the significant number of studies has confirmed that patients poor or non-adherence to TC treatment is correlated to TC phobia (Charman et al., 2000). These fears, beliefs and attitudes, whether or not rational, could be the main cause of the poor or non-adherence to TCs therapy. Underuse of TCs can consequently reduce the treatment response in many patients, which later on can also lead to increased health care costs. In general, TCs phobia is a frequent concern expressed by 40% to 73% of dermatology patients (Smith et al., 2013a). However, designating the fear associated with TCs use as "phobia" may well be a misnomer because of the number of rational reasons behind patients' fear of TCs (Smith et al., 2013b). As a consequence, patients not only are often advised and warned of the risk of TCs by friends, relatives and even by various media, but also by traditionally trusted sources such as health care providers, doctors and pharmacists. This situation very often creates an unenthusiastic cultural environment for patients and may lead to poor or nonadherence to prescribed TC treatment. Generally speaking, reports of treatment non-adherence and negligence are in the range of 20-80% (Aubert and Barbarot, 2012). On one hand, poor adherence to medicine treatment in most cases is associated with long-term regimens, asymptomatic disease conditions, regimen complexity, life style, misperceptions, etc., and on the other hand, good adherence is associated with more severe symptoms of disease, knowledge about and efficacy of the treatment, adequate social support and trust in the doctors and pharmacists (Aubert and Barbarot, 2012).

In an era where efficacious drug therapies exist or are being developed at a rapid rate, it is discouraging that one half of patients whom appropriate medication is prescribed fail to utilize the full medicine benefits because of inadequate adherence and compliance to prescribed treatment caused by different reasons, beliefs or misperceptions.

Table 1. The most frequently dispensed prescription TCs in the Republic of Macedonia*

Generic drug product (ATC code D07)	Classification of TC Potency (Class/Group)	Number of dispensed prescription TCs (drug packages)
Betamethasone dipropionate (0.05%) (ointment/cream)	Group II/III, WHO Potent, Class II/III UK	102938
Betamethasone dipropionate (0.05%) and salicylic acid (ointment/lotion)	Group II and VWHO Potent, Class II/III UK	49623
Diflucortolone valerate (0.1%) (cream/ointment)	Potent, Class II UK	79558
Methylprednisolone aceponate (0.1%) (cream/emulsion/ointment)	Group VII WHO Moderate potency, Class III, UK	31946
Hydrocortisone or hydrocortisone acetate (0.5, 1 and 2.5 %) (cream/ointment/spray)	Group VII WHO Mild potency, Class IV UK	253

* Ministry of Health of the R. Macedonia, Annual report, June 2014.

The prescription TC medicines available in the R. Macedonia, their relative potencies, as well as their annual dispensing according to the prescribing practice are presented in Table 1 (June 2013 - June 2014).

As presented in Table 1, it is obviously that the most frequently dispensed prescribed TCs belong to the potent group while, the dispensing of a moderate and mild TCs is less prevalent. These data were intriguing to explore the adherence to TC prescribed treatment since to the best of our knowledge, no comprehensive study assessing factors associated with adherence to treatment advice on TCs including nature, origins and frequency of TC phobia (if present) among patients and caregivers, has been conducted to present in our country.

Therefore, the aim of the present assessment was to obtain information on the frequency of TC use among patients in the RM and to evaluate the origins and emotional attitudes towards the use of TCs in patients and health-care professionals, as well as reasons behind the eventual lack of adherence to treatment recommendations (Bewley, 2008).

Materials and methods

Questionnaire-structuring process

Bearing in mind that it has always been considered a good survey practice to pre-test and to ensure that questions can be easily understood and answered by respondents, during the first step of the questionnaire-structuring process a focus group methodology was applied. Actually, this phase was conducted in the course of June and August 2013 and involved 16 adult patients with dermatological problems and 16 health professionals (8 general practitioners and 8 community pharmacists) in order to collect preliminary data on real-life attitudes, beliefs and perceptions about TC treatment and phobia. As mentioned above, this screening questionnaire was also developed with the aim to explore the level of understanding, acceptability (ques-

tions wording, complexity and ambiguity of proposed answers), the time required to complete the questionnaire. Obtained results enabled us to generate direct anonymous final questionnaire consisting of 25 refined items. Faculty of Pharmacy, "Ss Cyril and Methodius University" in Skopje, RM, approved this questionnaire and study.

Study design and data collection

An anonymous self-completed questionnaire specifically designed for the purpose of the current study involved four main groups of questions covering: (1) demographic and socio-economic characteristics, (2) basic knowledge about corticosteroid therapy, (3) attitudes, beliefs and perceptions about TC treatment and phobia (if present); and (4) degree of confidence and trust of patients in health-care professionals and confidence and trust among health-care professionals. The enclosed cover letter served as informed consent for the questionnaire.

Demographic and socio-economic characteristics of the respondents were considered as independent variables – X (in total 7 items). Moreover, the questions related to TC treatment and the source and prevalence of TCs phobia were considered as dependent variables – Y (in total 18 items). The qualitative data were collected between October 2013 and April 2014 from different regions of the RM. Strictly speaking, precisely 400 questionnaires were distributed in all regions of the RM and 360 filled in were returned back (90 % response rate). Items with a rate of missing values >20% were eliminated and, thus, 301 questionnaires were finally included in the analysis.

Key respondents were selected from a pool of patients who attended a doctor's appointment (examination) (specialist or general practitioner) or visited the community pharmacy. They were asked to complete the questionnaire prior the consultation with health professionals. This was also followed by a representative questionnaire survey among doctors (general practitioners, dermatologists, paediatricians) and pharmacists in their professional envi-

ronment.

Obtained data were tabulated using Microsoft Excel® (Microsoft Corp. Redmond, WA, USA) and were computed and consequently evaluated using statistical software STATGRAPHICS Centurion XVI evaluation (StatPoint technologies Inc., USA) and multivariate statistical analysis software SIMCA 13 (Unimetrics AB, Sweden). Values of p less than 0.05 were considered significant.

Results and discussion

Characteristics of the population samples

The study included a nationally representative sample of 301 adults aged 16 and older. Mean age $\pm$ Standard Deviation (SD) of the respondents was 40.87 ± 15.1 years. Detailed socio-demographic characteristics of the interviewed sample are presented in Table 2.

In order to study the TCs use and to determine the reasons for patients' adherence/non-adherence to prescribed

Table 2. Detailed socio-demographic characteristics of the surveyed population groups (n=301)

Variables (X)	Categories	Relative frequencies (%)
Gender	male	28.24
	female	70.43
	No response	1.33
Age	16-30 years	23.25
	31-50 years	53.16
	51-70 years	19.93
	Over 70 years	2.66
	No response	1
	Macedonian	68.11
Ethnicity	Albanian	23.59
	Serbian	1.99
	Turkish	3.65
	Boshnjak	1
	Roma	0.33
	Other	0.66
	No response	0.66
Educational attainment	Elementary school degree	5.32
	High school degree	13.62
	University degree	81.06
Social economic status (Income per capita per month)	Low (< 100 EUR)	9.03
	Medium (100-200 EUR)	32.44
	High (>200 EUR)	58.53
Professional healthcare	Pharmacist	40.20
	General practitioners	13.62
	Specialist dermatologist	5.32
	Specialist paediatricians	7.64
	Other doctor specialists	1
	Non-healthcare	24.25
	Other	7.64
Occupational setting/position	No response	0.33
	Community pharmacist	36.88
	Medical doctors	26.24
	Patients	36.88

TCs treatment and further onto select the most important and significant variables that are related to TCs phobia among the respondents included in the survey, multivariate statistical analysis - partial least square (PLS), hierarchical cluster analysis (HCA), partial least square - discriminant analysis (PLS-DA) and class modelling (CM) were performed.

Thus, PLS analysis resulted with model in which 77.3% (R^2X_{cum}) of X variables explained 56.6% (R^2Y_{cum}) of Y results with predictability of 54.4% (Q^2_{cum}). Considering that goodness of fit (R^2Y) and goodness of

prediction (Q^2) should be in a reasonable agreement, preferably not separated by more than 20-30% (Malzert-Freon et al., 2010), and taking into account that Q^2 is larger than 0.5, the obtained values for R^2Y and Q^2 indicated that the model is interpretable. Performed ANOVA in the cross validated residuals of a Y variable returned p value indicative of the statistical significance of the investigated model ($p < 0.05$).

Fig. 1 presents the scatter plot (map) of X observations (demographic and socio-economic characteristics of the sample; sex, age, nationality, socio-economic status, edu-

Fig. 1. PLS 3D Scatter plot representing the window of X space for performed analysis a) X- axis $t[1]$, Y-axis $t[2]$ and Z-axis $t[3]$, b) X-axis $t[3]$, Y-axis $t[4]$ and Z-axis $t[5]$.

Fig. 2. Dendrogram created by Hierarchical Cluster Analysis.

cational background, profession and the occupational setting/position from which they filled in the questionnaire (as a community pharmacist, medical doctor or patient), confirmed that the observations are well suited with respect to each other in the window of modelled X space.

Taking into consideration that relationship between variables usually might be different in different population groups, before proceeding with the in-depth analysis of the data it is very important to determine if there are any clusters or groups in the analysed population sample. With this rationale, Hierarchical Cluster Analysis (HCA) was applied (calculated with Ward's criterion and sorted by size) and dendrogram was created as follows (Fig. 2).

Analysis of the dendrogram pointed out that there were 3 main clusters (groups) in the analysed sample. To interpret the clusters seen in the dendrogram, PLS-DA was applied. PLS-DA resulted with 4-dimensional model where R^2X_{cum} was 71.4%, R^2Y_{cum} 96.7% and Q^2_{cum} 93.9%. Score scatter plot (Fig. 3) displayed that all samples were well suited with respect to each other in the window of modelled X space without presence of outliers in the data.

The size of the regression coefficients related to scaled and centred X-variables showed that the clusters were mainly related to the profession and the position of respondents in the professional setting of completing of the questionnaire (community pharmacist, medical doctor or patient) by domination of the latest. The first cluster is related to the community pharmacist and pharmacy profession, second cluster is related to the medical doctors and accordingly to general practitioners and specialists and the third cluster is related to the patients and non-healthcare respondents.

To make further analysis of the clusters, PLS-class modelling (PLS-CM) was applied, followed by deter-

mining the, relationship between variables in each cluster (group). Consequently, Table 3 displays a summary of specific PLS-CM for batch evolution model. Taking into account the present professional position at the time of assessment when key respondents filled in the questionnaire, it was noticed that 36.88% of the population surveyed were community pharmacists (PLS-Class 1), 26.24% were medical doctors (PLS-Class 2) and 36.88% were patients (PLS-Class 3).

The survey revealed that 90.7% of interviewed respondents were familiar with TCs. Moreover, the TCs had been used by majority (88.37%) of the responders in the past 6 months. Related to the later finding, TCs were used either personally (48.87%), by son/daughter (21.8%) or by other family members (29.33%). The majority of respondents (77.07%) used TCs rarely (<2 times/year) vs 15.41% and 7.52% that used TCs often (3-4 times/year) or very often (> 5 times/year), respectively. According to the data obtained from the Ministry of Health of the RM (annual dispensing for period June 2013 - June 2014) the most commonly dispensed TCs (Table 1) were betamethasone dipropionate (cream, ointment) with 102 938, then, diflucortolone valerate (cream, ointment) with 79 588, betamethasone and salicylic acid (ointment, lotion) with 49 623, Methylprednisolone aceponate (cream, ointment) 31 946 and Hydrocortisone type (cream, ointment and spray) with 253 dispensed units. It also showed that TCs were by far most commonly used for the treatment of contact (31.2%) and atopic dermatitis (31.45%).

Respondents were also asked for how long they had used their most recently prescribed TC. The survey revealed that 54.49% of respondents used TCs up to one week and 21.6% of them, up to 2 weeks, while the duration of treatment was not defined only by 5.98% of the sub-

Fig. 3. PLS-DA 3D Scatter plot representing the window of X space for performed analysis a) X- axis $t[1]$, Y- axis $t[2]$ and Z- axis $t[3]$, b) X-axis $t[2]$, Y-axis $t[3]$ and Z- axis $t[4]$.

Table 3. Model window of specific PLS-Class model for batch evolution model

	A	N	Component	R ² X (cum) (%)	R ² Y (cum) (%)	Limit	Q ² (cum) (%)	Significance	Iterations
PLS-Class (1)	2	111	1	73.5	54	0	53.3	R1	3
			2	81.9	57.1	0	55.7	R1	6
PLS-Class (2)	2	79	1	64.9	57.1	0.05	56	R1	3
			2	74.1	62.8	0.05	60.8	R1	6
PLS-Class (3)	2	111	1	54.1	51.3	0	50.2	R1	3
			2	63.5	54.4	0	52.5	R1	7

A - Number of model dimensions; N - number of observations; number of X variables = 7, expanded 34; number of Y variables = 18, expanded 102

jects and 5.65% were unsure about the answer. The results were in accordance with the recommendations that treatment should not be longer than two weeks on the face and 3–4 weeks on the rest of the body (www.australian-prescriber.com).

For a general item exploring possible TCs phobia among population group of respondents, two main questions were evaluated, i.e. individual attitudes for TC treatment and possible fear of using them.

The question concerning the attitudes on TC treatment was answered as follows: 21.6% of all respondents had negative attitude on TC treatment, 74.75 % of the respondents expressed the opposite opinion, and the other 3.65% of respondents could not give a definite answer.

Negative attitude regarding the TC use was prevalently identified among female respondents, in the age group of 31-50 years, with university degree diploma and those with high socio-economic status, as well as among the group of doctors (specialist paediatricians). Detailed analysis of specific groups' attitudes for TCs treatment is presented in Table 4.

Similar results were obtained on the question concerning the possible fear of TCs use, by individual. Actually, 63.78% of individuals use TCs without any fear, while 34.22% expressed concerns about TCs use, and 5.4% did not give any answer. In the particular group of patients, 72.07% believed that TCs treatment was safe and used TCs without any fear and doubts, while 27.03% were concerned about the TCs use, especially females in both age groups 16-30 and 31-50 years, Macedonian nationality, with university degree and high socioeconomic status. Among

health professionals groups results revealed that 58.56% of community pharmacists responded that they used TCs freely and without any fear while 37.84% were concerned about the TC use and 3.6% did not give a definite answer. Comparable results were obtained for medical doctors where 59.49% used TCs without any fear, 39.24% were concerned and 1.27% did not respond to this question. Being worried about TCs usage admits 73.91% of paediatricians, 31.71% of general practitioners and only 6.25% of specialists of dermatology. Obtained results were in correlation with answers to the previous question, where doctors expressed their negative attitudes and emotional aversion for TC treatment. These results were supported by the fact that most of the paediatricians (56.52%) believed that TCs treatment was dangerous/harmful for the patients irrespective of treatment duration, 30.43% that long term treatment was dangerous and only 13.04% stated that short term TC's treatments was positive. The reason for this attitude of paediatricians is probably related to the fact that TC treatment in paediatric population should be used with extreme caution as this population group is more susceptible to TCs adverse effects, have difficulty in metabolising potent corticosteroids, and increased systematic absorption due to the skin surface area: body weight ratio (Nelson et al., 2006; Ozon et al., 2007).

It has already been shown that TCs phobias may have a negative impact on treatment adherence. It is very important to explore the origin of fears and beliefs such as fear of potential side-effects, roles of family circle and the media, lack of consistent information delivered by health-caregivers, discrepancies concerning treatment among dermatolo-

Table 4. Results regarding the attitude on TCs therapy treatment by specific group

Percentages (%)	Patients	Community pharmacists	Medical doctors	General practitioners	Specialist paediatricians	Specialist dermatologists
Positive attitude	85.59	70.27	65.82	78.05	26.09	93.75
Negative attitude	13.51	22.52	31.65	19.51	73.91	/
No respond	0.9	7.21	2.53	2.44	/	6.25

gists, paediatricians and general practitioners, and between medical doctors and pharmacists.

Literature data indicate that a great number of patients admitted that they have been non-adherent to TC treatment because of concerns about potential adverse events, especially skin thinning and systemic effects on growth and development (Aubert and Barbarot, 2012). In our study, only 18.6% of the total survey respondents noticed some side effects and the skin redness was the most frequently observed side-effect (30.36%). In the particular group of patients, 18.02% of them noticed some side-effect during TC therapy, 77.48% stated that during usage they did not observe any side-effect and 4.5% did not give answer. Interestingly, 66.67% of patients who expressed fear of TC's use did not experience any side effect. Generated results highlight that negative beliefs and attitudes concerning TC treatment/use were not always based on previous negative experiences of the patients and/or observed side-effects.

Earlier studies suggested that patients were warned of the dangers of TCs by distrusted sources such as friends, relatives and media and these often unsolicited advices could lead to non-adherent to TC treatment (Smith et al., 2010).

Our survey results concerning patients knowledge and sources of information about TC treatment and proper use were as follows: 43.24% responded that they received all the information from a medical doctor, 11.71% were mostly advised by community pharmacists, 12.61% educated themselves from scientific studies, 8.11% of the patients received information from his/her friend/relative, 4.5% of the patients searched the information on the internet and 1.8% received information from the media, while 11.71% give multiple answers and 6.31% did not respond to the question. In the patients group that received information from medical doctors, males in the age group 16-30 years, of Macedonian and Albanian nationality, with elementary and high school education and low and medium social-economic status were determined to have statistical significance, while for those that obtained information from scientific studies statistically significant were the females, in the age group 31-50 years, of Macedonian nationality, university degree and high social-economic status.

As expected, health care professionals responded that they acquired all the information from scientific studies (>82%).

More than 82.9% of all survey respondents confirmed that they read the patient information leaflet (PIL). However, the respondents have limited confidence in the information provided in the PIL, since only 17.12% of the patients, 27.85% of the medical doctors and 35.14% of community pharmacists confirmed that they dominantly trust PIL before TCs use. Most of the patients expressed trust to medical doctors (66.67%), whereas doctors and community pharmacists expressed trust in their own knowledge about TCs, that is 64.56% and 38.74%, respectively. Surprisingly low trust was observed among healthcare provid-

ers, where 13.51% of the community pharmacists trusted medical doctors and only 1.27% vice versa.

Also, earlier studies confirmed the importance of confidence and enhanced communication among the providers, which was not observed in our study.

Study constraints

Study constraints could be looked for in the fact that no distinction was made whether TC medication was recommended for the first time or whether it had already been prescribed previously; similarly there was no information about the TCs potency class used.

Conclusion

Adherence to treatment advice is a complex issue by nature, involving many psycho-social factors. Performed analyses indicated that TCs phobia is present to some extent among surveyed population in R. Macedonia - 21.6% and 34.22% of all respondents expressed negative attitudes and fear of TCs use, respectively. Healthcare providers expressed higher negative attitude, nearly twice and trice compared to patients' group. Notably, TCs phobia is more present among non-dermatologists than dermatologists which could be related to the fact that dermatologists have more experience, knowledge, practice and available information and hence, greater comfort using TCs agents (Nolan et al., 2012). Significant difference was observed in the specific group of paediatricians where negative attitude and fear of TCs use are present in the identical percentage of 73.91%, which is most likely due to the specific population characteristics, i.e. of infants and children. Low level of negative attitude (13.51%) and fear (27.03%) of TCs use was observed in patients' group and these cannot be correlated with any literature data presenting higher level of TCs phobia (Charman et al., 2000). These specific findings in our study could be attributed mostly to the good quality of TCs therapy management anticipated via low level of noticed side effects and relatively high rate of patient's trust to medical doctors. However, the low level of trust was detected among patients (11.71%) towards community pharmacists regarding the TCs use. This finding shows the need for raising the awareness of patients about community pharmacists as health care professionals responsible for medication therapy management, optimization of drug therapy and improvement of therapeutic outcomes. Considering that in this study, low mutual trust between medical doctors and community pharmacists was observed as well, inter-professional collaboration must evolve since the reasonable trust, communication, and relationship between healthcare providers are the keys for optimal medication management and improving patient compliance.

Declaration of interests

The authors report that they have no competing interests.

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Резиме

Проценка на ставовите на пациентите, лекарите и фармацевтите во Р. Македонија за употребата на локалните кортикостероиди

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Клучни зборови: локални кортикостероиди, кортикофобија, истражување

И покрај тоа што терапијата со локални кортикостероиди е златен стандард во третманот на голем број на дерматолошки состојби, стравот поврзан со нивната употреба е феномен присутен меѓу пациентите и здравствените работници. Ставот на здравствените работници во однос на примената на кортикостероидите може да има значајно влијание врз појавата на кортикофобија кај пациентите. Од тие причини, неопходно е да се обрне внимание на оваа појава со оглед дека истата може да има значително влијание врз прифаќањето и придржувањето кон терапијата од страна на пациентите.

Имајќи во предвид дека вакво истражување досега не е направено во Р. Македонија (РМ), структуриран беше анонимен прашалник со цел да се согледаат ставовите и обемот на изразеност на предрасудите кон употребата на локалните кортикостероиди кај пациентите и здравствените работници, а во насока истите да се објаснат, односно да се истражат причините и да се дефинираат идните насоки за обука на здравствените професионалци во ова поле.

Добиените резултати од истражувањето укажаа дека кортикофобијата е присутна кај испитуваната популација (21,6% и 34,22% од сите испитаници имаа негативен став или страв, соодветно кон употребата на локалните кортикостероиди). Приближно 27% од пациентите се изјасниле дека се плашат да ги употребуваат овие лекови. Негативниот став кон употребата на локалните кортикостероиди е повеќе изразен кај здравствените работници (~39%), при што обемот на изразеност на предрасудите е доминантен кај специјалистите педијатри (73,91%).

Севкупните резултати би можеле да претставуваат основа за идентификација и менаџирање на кортикофобијата со цел подобра соработка со пациентите и ефикасен третман.