

UPOTREBA PLACEBO TERAPIJE U STOMATOLOGIJI

USING OF PLACEBO THERAPY IN THE STOMATOLOGY

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Kratak sadržaj

Ispitivanjem se pokušalo objasniti postojanje straha kod adolescenata od stomatološkog lečenja, ocenjivanjem straha preko njegove dve komponente (kongnitivne i fiziološke). Kongnitivna komponenta, praćena je upitnikom pre prve stomatološke intervencije (standardnom skalom opšte anksioznosti). U ispitivanju je učestvovalo 100 adolescenata. Na osnovu analize upitnika ispitanici su se razvrstali u grupe: normalno, patološki i povišeno anksiozni.

Prilikom treće stomatološke intervencije, pacijenti su dobijali placebo (vitamin C, pola tablete, oralno, 30 minuta pre početka rada stomatološke intervencije koje su bile identične, tj. vršena je sanacija dubokog karijesa).

Fiziološka komponenta (pogled i boja lica) procenjivali su se metodom kliničke opservacije. Svi parametri mereni su pre sve tri stomatološke intervencije. U ovom ispitivanju, kod parametara koji su se merili kliničkom opservacijom, došlo je do smanjenja nesigurnog pogleda i blede, odnosno crvene boje lica prilikom upotrebe placebo terapije.

Ključne reči: placebo, adolescenti

Uvod

U stomatologiji, pa i dečijoj, većina intervencija povezana je sa bolom i strahom od bola, koji je kod dece u većoj meri izražen nego kod odraslih, i predstavlja razlog za pojavu uznemirenosti i straha vezanih za stomatološko lečenje. O problemu straha, bola i anksioznosti pisano je u psihologiji, psihijatriji, književnosti, filozofiji. Međutim, u medicini ipak još uvek nije potpuno razjašnjen strah od stomatološkog lečenja kod dece, ali je poznato da je strah u specifičnom odnosu sa dobom uzrasta deteta.

Abstract

By the investigation it was tried to explain the existence of fear in adolescents from stomatological treatment, by the appraisal of fear through its two components (congenitive and physiological). Congenitive component, was followed by the question marks before the first stomatological intervention (by standard scale of general anxiety).

In the studies participated 100 adolescents. On the basis of the analysis of question marks the examinees were classified into three groups: normally, pathologically and increasingly anxious.

On an occasion of third stomatological intervention, patients were obtaining the placebo (vitamine C, half tablet, orally), 30 minutes before starting the work of stomatologic intervention, which were identical, i.e. the sanitation of deep caries was carried out.

Physiological component (look and colour of face) were appraised by the method of clinical observation. All parameters were measured before all three stomatological interventions. In this study, in parameters measured by clinical observation came to decrease of unsure look and pale and red face colour at using of placebo therapy.

Key words: placebo, adolescents.

Introduction

In the stomatology and in the children's one, the majority of interventions is connected with pain and fear from it, which is in children to a greater extent expressed than in the adults and it represents the reason for the appearance of disturbance and fear connected with stomatological treatment. About the problem of fear, pain and anxiety was written in psychology, psychiatry, literature and philosophy. However, in the medicine there is still not completely explained the fear from stomatological treatment

Naravno da je svako dete individualno i čini svet sam za sebe, tako da zahteva drugačiji pristup u radu, ali neke šeme ponašanja su modeli razmišljanja jednaki kod dece u određenom dobu, i bilo bi jako dobro znati šta se može očekivati. Tako, u radu sa adolescentima, stomatolog očekuje razumevanje i manju ili veću saradnju pacijenata. Međutim, u praksi se pokazuje da stomatolog neprestano mora da osvaja raspoloženje i poverenje adolescenata, da psihološki utiče na pacijenta, kako bi mogao da izvrši planiranu stomatološku intervenciju¹. Uopšte, da bi stomatološki tretman bio uspešan, važno je uvek uspostaviti dobar kontakt s detetom što je izuzetno teško, s obzirom na često prisustvo dentalnih fobija. Tako više od pola američke populacije pati od dentalne fobije ili anksioznosti². Liddel i sar. su 2000. godine ispitivali vezu između polova i starosti na dentalnu anksioznost pacijenata u Kanadi i zaključili su da je kod starijih pacijenata zabeleženo manje bolno iskustvo u dentalnoj proceduri, nego kod mlađih osoba, i da su žene pokazale značajno bolje savladavanje straha nego muškarci³. Suprotno od Liddel-a, Walker i sar.⁴ su, ispitujući asocijaciju između traumatskog iskustva tokom života (koja nisu u vezi sa dentalnim situacijama) i dentalne fobije, pokazali da žene, koje su pretrpele neko negativno iskustvo u detinjstvu, imaju izuzetno visok nivo dentalnog straha.

De Johgh i Stouthard ispitivali su anksioznost pacijenata u Amsterdamskom zdravstvenom centru i pronašli da je većina pacijenata pokazala anksioznost tokom popravke zuba⁵. Milgram i sar. izneli su da 20.4 % mladih stanovnika u Americi ima strah od stomatologa⁶.

Apostolović M. ispitivala je prisustvo straha od stomatološkog lečenja kod dece na našem području i došla je do podatka da 27.75 % dece ima strah od posete stomatologu⁷.

Placebo je lek koji nema medicinsko delovanje, ali dovodi do toga da se pacijentu poboljša stanje, zbog njegovog verovanja da je taj lek bio delotvoran. Placebo terapija započinje rađanjem poverenja pacijenta u doktora i nastavlja se podsticanjem punog rada na ličnom odbrambenom sistemu. Nema jedinstvenog, objektivnog modela objašnjenja mehanizma delovanja placebo efekta. Pojam placebo suviše je kompleksan, te se za sada shvata samo kroz hipoteze⁸.

in children, but it is known that the fear is in a specific relation with regard to age of child. Of course, every child is individual and makes the world for himself, so that requires another approach in the work, but some schemes of behaviours, models of thinking are equal in children of certain age and it would be very good to know what may be expected. So, working with adolescents the stomatologist expects understanding and more or less higher cooperation of patients. However in practice is shown that the stomatologist must continuously to conquer the mood and confidence of the patient, in order to be able to perform the stomatologic intervention planned¹. Generally, if the stomatological treatment could be successful it is always important to establish a good contact with the child, which is exceptionally difficult taking into consideration of often presence of dental phobias. So, more than half of American population suffers from dental phobia or anxiety². Little et al. in 2000 investigated the connection between sexes and ages on dental anxieties in the patients in Canada and concluded that in older patients was registered less painful experience in the dental procedure than in younger individuals, and that females have shown considerably better overcoming of fear than males³. Contrary to Liddel, Walker et al.⁴ studying the association between traumatic experience in the course of life (which is not in connection with dental situations) and dental phobia have shown that women which experienced some negative experience in the childhood have an exceptionally high level of dental fear.

De Johgh and Stouthard studied the anxiety of patients in Amsterdam health center and found that the majority of patients have shown the anxiety in the course of tooth repair⁵. Milgram et al. stated that 20.5% of young inhabitants in America have a fair from the stomatologist⁶.

Apostolović M. investigated the presence of fear from stomatological treatment in children in our area and got to data that 27.75% children have a fear from the visit to stomatologist⁷.

Placebo is drug without the medicinal effect, but leads to improve the condition of the patient, because of his belief that this drug was efficient. Placebo therapy initiates by creation of confidence of the patient to doctor and continues by stimulation of the whole work on personal defense system. There is no unique, objective model of explanation of mechanism of working of the placebo effect. The concept of placebo is too complex, and now it is understood through the hypotheses only⁸.

Cilj

Ovim ispitivanjem analiziralo se prisustvo straha kod adolescenata od stomatološkog lečenja, ocenjivanjem straha preko njegove dve komponente (kongnitivna i fiziološka) i pratio se mogući uticaj primene placeba na razvoj straha.

Materijal i metod

Ispitivanjem je obuhvaćeno 100 adolescenata, 49 ženskog i 51 muškog pola. Kongnitivna komponenta straha, analizirana je upotrebom upitnika koji je ispunjavan pre prve stomatološke intervencije (standardna skala opšte anksioznosti koja se dobila na Filozofskom fakultetu u Novom Sadu, autora Carol E. Watkins⁹).

Adolescenti su samostalno ispunjavali upitnik.

Standardna skala opšte anksioznosti⁹

Na osnovu analize upitnika, adolescenti su se razvrstali u tri grupe: normalno (SCOR od 0 do 39 bodova), povišeno (SCOR od 40 do 79 bodova) i patološki anksiozni (SCOR od 80 do 120 bodova).

Fiziološka komponenta (pogled i boja lica) procenjivani su metodom kliničke opservacije. Opservaciju je izvodio voditelj ispitivanja-stomatolog (uvek ista osoba), koji je po sopstvenoj proceni zaokruživao jednu od ponuđenih varijanti, za pogled (jasan, miran; bezizražajan i nesiguran), za boju lica (normalna; crvenilo i bledilo). Svi ispitanici praćeni su tokom 3 stomatološke intervencije (koje su bile identične, vršena je sanacija dubokog karijesa). Pre treće intervencije pacijenti su dobijali placebo (vitamin C, pola tablete, oralno, 30 minuta pre početka rada stomatološke intervencije).

Pogled i boja lica ispitanika analizirani su pre sve tri stomatološke intervencije.

Rezultati

Analizom odgovora iz upitnika, ustanovljeno je da je bilo najviše ispitanika sa povišenom anksioznošću od stomatoloških intervencija,

Aim

By this investigation the presence of fear in adolescents from stomatological treatment has been analyzed, by appraising of fear through its two components (cognitive and physiologic) and following the possible effect of application of placebo on the development of fear.

Material and method

Investigation included 100 adolescents, 49 of female and 51 of male sex. Cognitive component of fear was analyzed by using of question marks which were filled before the first stomatologic intervention (standard scale of general anxiety)⁹.

Adolescents filled the question marks independently.

Standard scale of general anxiety⁹

On the basis of analysis of question marks, the adolescents were classified into three groups: normally (SCOR from 0 up to 39 points), increasing (SCOR from 40 up to 79 points), and pathologically (SCOR from 80 up to 120 points) ly anxious.

Physiological component (look and colour of face) were appraised by the method of clinical observation. The observation was carried out by the leader of studies-stomatologist (always the same person), who according to his own appraisal encircled one of the variants offered, for look (clear, still, expressionless and insecure), and for the face colour (normal; redness and paleness). All examinees have been followed during three stomatological interventions (which were identical, the sanitation of deep caries was carried out). Before the third intervention the patients obtained placebo (vitamine C, half tablet, orally, 30 minutes before beginning of work of stomatologic intervention).

Look and colour of the face of the examinee have been analyzed before all three stomatological interventions.

Results

By the analyses from the question marks, it was found that there have been the majority of examinees with increased anxiety from stomatological interventions, while those normally anxious were considerably less (Tab.1, Graph.1.).

STANDARDNA SKALA OPŠTE ANKSIOZNOSTI⁹

1. Osećam se spokojno	NIMALO	MALO	MNOGO
2. Osećam se bezbedno	NIMALO	MALO	MNOGO
3. Napregnut/a sam	NIMALO	MALO	MNOGO
4. Osećam se napeto	NIMALO	MALO	MNOGO
5. Osećam se opuštено	NIMALO	MALO	MNOGO
6. Osećam se uznemireno	NIMALO	MALO	MNOGO
7. Brinu me misli o mogućim nesrećama	NIMALO	MALO	MNOGO
8. Osećam se zadovoljno	NIMALO	MALO	MNOGO
9. Osećam se uplašeno	NIMALO	MALO	MNOGO
10. Osećam se komotno	NIMALO	MALO	MNOGO
11. Osećam se samouvereno	NIMALO	MALO	MNOGO
12. Osećam se nervozno	NIMALO	MALO	MNOGO
13. Nervozan/a sam	NIMALO	MALO	MNOGO
14. Osećam se neodlučno	NIMALO	MALO	MNOGO
15. Opušten/a sam	NIMALO	MALO	MNOGO
16. Osećam se ispunjenim/om	NIMALO	MALO	MNOGO
17. Zabrinut/a sam	NIMALO	MALO	MNOGO
18. Osećam se zbunjeno	NIMALO	MALO	MNOGO
19. Osećam se staloženo	NIMALO	MALO	MNOGO
20. Osećam se prijatno	NIMALO	MALO	MNOGO
21. Osećam se prijatno	NIKAD	PONEKAD	UVEK
22. Osećam se nervozno i nemirno	NIKAD	PONEKAD	UVEK
23. Osećam se zadovoljan/a sobom	NIKAD	PONEKAD	UVEK
24. Voleo/la bih da budem toliko srećan/na kao što mi se čini da su drugi srećni	NIKAD	PONEKAD	UVEK
25. Osećam se kao promašen čovek	NIKAD	PONEKAD	UVEK
26. Osećam se odmereno	NIKAD	PONEKAD	UVEK
27. Spokojan/a sam, smiren/a, pribran/a	NIKAD	PONEKAD	UVEK
28. Osećam da se teškoće toliko gomilaju da više nisam u stanju da ih prebrodim	NIKAD	PONEKAD	UVEK
29. Previše brinem o stvarima koje u stvari nisu važne	NIKAD	PONEKAD	UVEK
30. Srećan/na sam	NIKAD	PONEKAD	UVEK
31. Javljaју mi se uznemiravajuće misli	NIKAD	PONEKAD	UVEK
32. Nedostaje mi samopouzdanje	NIKAD	PONEKAD	UVEK
33. Osećam se bezbedno	NIKAD	PONEKAD	UVEK
34. Lako donosim odluke	NIKAD	PONEKAD	UVEK
35. Osećam se kao da ne pripadam ovde	NIKAD	PONEKAD	UVEK
36. Zadovoljan/na sam	NIKAD	PONEKAD	UVEK
37. Neka nevažna misao mi se mota po glavi i muči me	NIKAD	PONEKAD	UVEK
38. Razočaranja me pogađaju toliko jako, da ih ne mogu izbaciti iz misli	NIKAD	PONEKAD	UVEK
39. Stabilna sam ličnost	NIKAD	PONEKAD	UVEK
40. Kada razmišljam o mojim brigama i interesima, zapadam u stanje napetosti ili nemira	NIKAD	PONEKAD	UVEK

STANDARD SCALE OF GENERAL ANXIETY⁹

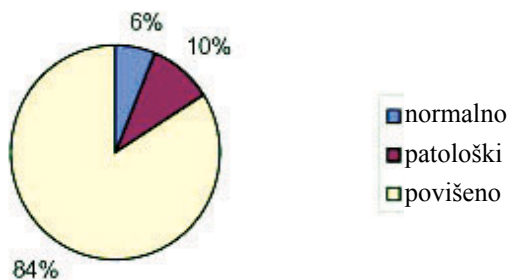
1. I am feeling calm	NOT AT ALL	SOME	VERY
2. I am feeling secure	NOT AT ALL	SOME	VERY
3. I am tense	NOT AT ALL	SOME	VERY
4. I am feeling strain	NOT AT ALL	SOME	VERY
5. I am feeling relaxed	NOT AT ALL	SOME	VERY
6. I am feeling disturbed	NOT AT ALL	SOME	VERY
7. I worry about possible misfortunes	NOT AT ALL	SOME	VERY
8. I am feeling satisfied	NOT AT ALL	SOME	VERY
9. I am feeling afraid	NOT AT ALL	SOME	VERY
10. I am feeling comfortable	NOT AT ALL	SOME	VERY
11. I am feeling self-confident	NOT AT ALL	SOME	VERY
12. I am feeling nervous	NOT AT ALL	SOME	VERY
13. I am nervous	NOT AT ALL	SOME	VERY
14. I am feeling undecided	NOT AT ALL	SOME	VERY
15. I am relaxed	NOT AT ALL	SOME	VERY
16. I am feeling fulfilled	NOT AT ALL	SOME	VERY
17. I am worried	NOT AT ALL	SOME	VERY
18. I am feeling confused	NOT AT ALL	SOME	VERY
19. I am feeling settled	NOT AT ALL	SOME	VERY
20. I am feeling pleasant	NOT AT ALL	SOME	VERY
21. I am feeling pleasant	NEVER	SOMETIMES	ALWAYS
22. I am feeling nervous and restless	NEVER	SOMETIMES	ALWAYS
23. I am feeling satisfied oneself	NEVER	SOMETIMES	ALWAYS
24. I should like to be so happy as it seems to me that the others are happy	NEVER	SOMETIMES	ALWAYS
25. I am feeling like a failure man	NEVER	SOMETIMES	ALWAYS
26. I am feeling steady	NEVER	SOMETIMES	ALWAYS
27. I am calm, serene, composed	NEVER	SOMETIMES	ALWAYS
28. I am feeling that the difficulties so accumulate that I am not able to overcome them	NEVER	SOMETIMES	ALWAYS
29. I take too much care about things which in fact are not important	NEVER	SOMETIMES	ALWAYS
30. I am happy	NEVER	SOMETIMES	ALWAYS
31. Disturbing thoughts inform to me	NEVER	SOMETIMES	ALWAYS
32. I am short of self-confidence	NEVER	SOMETIMES	ALWAYS
33. I am feeling secure	NEVER	SOMETIMES	ALWAYS
34. I make decisions easily	NEVER	SOMETIMES	ALWAYS
35. I am feeling like I do not belong here	NEVER	SOMETIMES	ALWAYS
36. I am satisfied	NEVER	SOMETIMES	ALWAYS
37. Some unimportant thought spins in my head and torments me	NEVER	SOMETIMES	ALWAYS
38. Disappointments hit me so much that I cannot exclude them from the thoughts	NEVER	SOMETIMES	ALWAYS
39. I am stable person	NEVER	SOMETIMES	ALWAYS
40. When I think about my cares and interests, I fall into state of tension or unrest	NEVER	SOMETIMES	ALWAYS

dok je normalno anksioznih bilo znatno manje (Tab.1, Graf.1).

Posmatranjem ispitanika ustanovljeno je da su većinom imali bezizražajan i nesiguran pogled pre intervencija i da su pri upotrebi placebo postajali smireniji, dobili jasniji i mirniji pogled (Tabela 2., Grafikon 2.)

Tabela 1. Anksioznost ispitanika od stomatološke intervencije

ANKSIOZNOST	Apsolutni broj pacijenata	Procenat (%)
Normalno	6	6%
Povišeno	84	84%
Patološki	10	10%
UKUPNO	100	100%

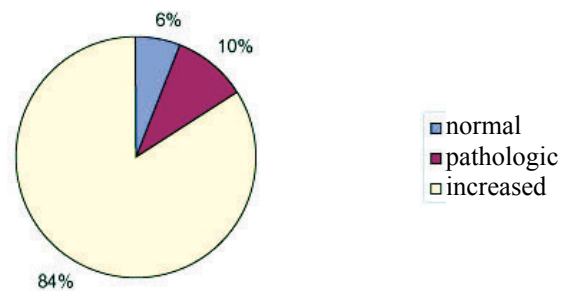


Grafikon 1. Anksioznost ispitanika od stomatološke intervencije

By observation of the examinees it was found that they have had mostly unexpressive and unsure look before interventions and that by using of placebo they became more calm, and obtained clearer and calmyer look (Table 2., Graphicon 2.).

Table 1. Anxiety of examinees from the stomatological intervention

ANXIETY	The total of patients	Percentage (%)
Normal	6	6%
Increased	84	84%
Pathologie	10	10%
TOTAL	100	100%



Graphicon 1. Anxiety of examinees from the stomatological intervention

Karakteristike pogleda adolescenata jasno su se menjale u zavisnosti od rednog broja intervencije (Tab.2), gde je u prvoj intervenciji jasan pogled bio 15%, u drugoj 43%, u trećoj 79%. Bezizražajan pogled u prvoj intervenciji iznosio je 51%, u drugoj 43% i trećoj 21%, a nesiguran u prvoj intervenciji bio je 34%, u drugoj 14% i trećoj 0%.

Analizom karakteristike boje lica ispitanika pre stomatoloških intervencija, jasno je ustanovljeno da se karakteristike menjaju (Tabela 3., Grafikon 3.) i to normalna boja u prvoj intervenciji bila je 15%, u drugoj 30% i trećoj 70%. Crvenilo u prvoj intervenciji iznosilo je 45%, u drugoj 54% i trećoj 23%. Bledilo u prvoj intervenciji bilo je prisutno sa 40%, u drugoj 16% i trećoj sa 7%.

Na poslednjem grafikonu vidi se da je intervencija sa placebo uticala na povećanje broja ispitanika sa normalnom bojom lica.

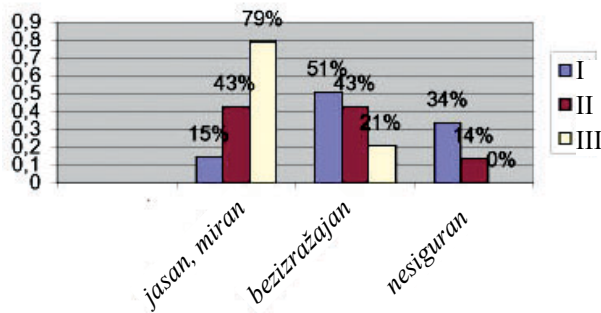
Characteristics of look of the adolescents were clearly changed depending on the ordinal numeral of intervention (Tab.2.), as for the first intervention look was clear for the 15% of people, for the second 43%, for the third 79%. Expressionless look for the first intervention was 51%, for the second 43% and for the third 21%, and insecure look for the first intervention was 34%, for the second 14% and for the third 0%.

By the analysis of the colour of face of examinees before stomatological interventions, it was clearly found that the characteristics changed (Table 3., Graphicon 3.) the normal face colour was 15% for the first intervention, for the first 30% for the second 70%. The redness for the first intervention was 45%, for the second 54% for the third 23%. The paleness for the first intervention was present at 40%, at the second 16% at the third 7%.

On the last graph it is seen that the intervention with placebo influenced on the increase

Tabela 2. Pogled pre sve tri intervencije

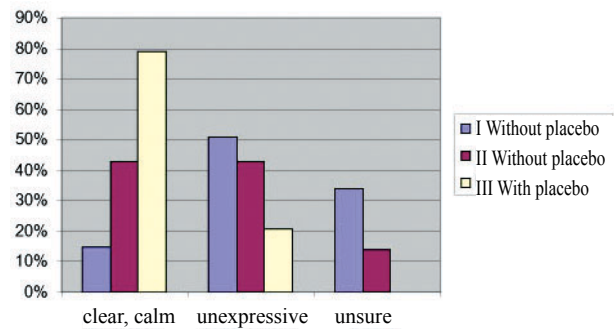
POGLED	I BEZ PLA-CEBA	II BEZ PLA-CEBA	III SA PLA-CEBOM
Jasan,miran	15%	43%	79%
Bezizražajan	51%	43%	21%
Nesiguran	34%	14%	0%
UKUPNO	100%	100%	100%



Signatura: I prva intervencija; II druga intervencija; III treća intervencija
Grafikon 2. Pogled ispitanika pre stomatoloških intervencija

Table 2. Look before all three interventions

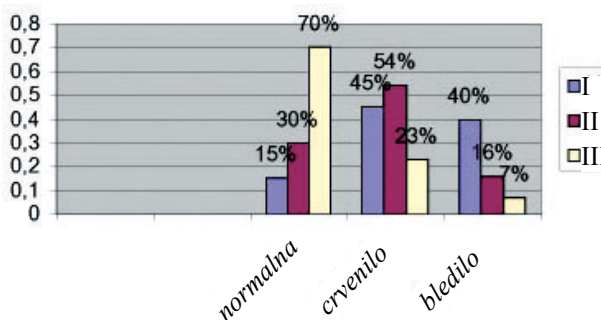
LOOK	I WITHOUT PLACEBO	II WITHOUT PLACEBO	III WITH PLA-CEBO
Clear, calm	15%	43%	79%
Unexpressive	51%	43%	21%
Unsure	34%	14%	0%
TOTAL	100%	100%	100%



Signature: I first intervention; II second intervention; III third intervention
Graphicon 2. Look of the examinees before all three interventions

Tabela 3. Boja lica pre sve tri intervencije

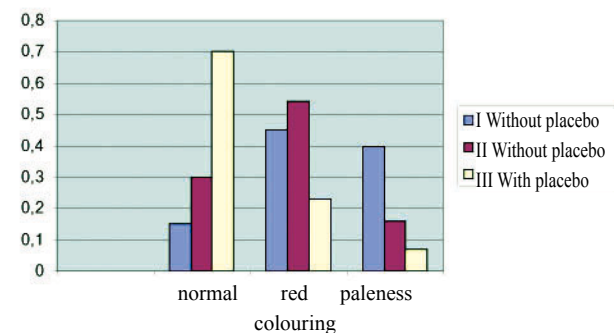
BOJA	I BEZ PLA-CEBA	II BEZ PLA-CEBA	III SA PLACE-BOM
Normalna	15%	30%	70%
Crvenilo	45%	54%	23%
Bledilo	40%	16%	7%
UKUPNO	100%	100%	100%



Signatura: I prva intervencija; II druga intervencija; III treća intervencija
Grafikon 3. Boja lica ispitanika pre stomatoloških intervencija

Table 3. Colour of face before all three interventions

COLOUR	I WITH-OUT PLA-CEBO	II WITH-OUT PLA-CEBO	III WITH PLACEBO
Normal	15%	30%	70%
red colouring	45%	54%	23%
Paleness	40%	16%	7%
TOTAL	100%	100%	100%



Signature: I first intervention; II second intervention; III third intervention
Graphicon 3. Face colour of the examinees before stomatological interventions

Diskusija

Analiza podataka dobijenih iz upitnika, jasno je pokazala da kod većine ispitanika postoji anksioznost od stomatološke intervencije, koja se sa psihofiziološkog aspekta može razmatrati kao stanje očekujuće opasnosti.

Za razvoj ličnosti, pa i nastanak njenih strahova, važni su postupci roditelja prema deci, kada su ona u fazi adolescencije. Roditelji deluju na decu i svojim primerom, pozitivnim ili negativnim, i najčešće za njih predstavljaju identifikacijske figure¹⁰.

Pošto postoji mnogo dentalnih i nedentalnih informacija o vezi između straha i bola, u literaturi još uvek nije sasvim jasna razlika između psiholoških i fizioloških faktora koji mogu uticati na pacijenta i ponašanje tokom dentalnog pregleda.¹⁰

Literatura o dentalnoj anksioznosti pokazuje stalno da je veliki procenat individua sa strahom imao negativno iskustvo u detinjstvu, što i jeste doprinelo razvoju sadašnjeg straha. Smatra se da je sam osećaj bespomoćnosti za ove pacijente od presudne važnosti za nastanak dentalnog straha¹¹.

Veliku ulogu u suzbijanju straha od stomatologa kod dece imaju, kako je već pomenuto, roditelji, koji treba u svakodnevnom razgovoru da objasne deci zbog čega su važne posete stomatologu. Ukoliko kod deteta postoje predrasude o stomatolozima i dentalnom bolu pred stomatologom je izuzetno težak zadatak. On mora da u kratkom vremenu, tokom intervencije, otkloni strah koji se godinama nagomilavao. Ovo će biti utoliko teže, ukoliko je prvi raniji susret sa stomatologom bio neprijatan¹².

Ovo istraživanje pokazuje da je uzimanje placebo terapije od velikog uticaja na strah od stomatološke intervencije kod adolescenata. Manifestacije straha koje su se uočavale promenom aktivnosti simpatikusnog nervnog sistema, što se videlo kako po boji kože ispitanika, tako i prema karakteristikama pogleda, postajale su manje izrazite pri upotrebi placeba. Pitanje je da li su adolescenti, uzimajući placebo, smatrali da on deluje na delove mozga odgovorne za bol, kao što se navodi u drugim sličnim ispitivanjima¹³.

Zapažanja slična našim iznosi i Apostolović¹⁴, istražujući uticaj placeba na strah od stomatološkog lečenja kod dece mlađeg školskog uzrasta, primenjujući kao placebo tablete

of number of examinees with normal colour of face.

Discussion

Analysis of data obtained from the question marks, has shown clearly that in the majority of examinees exists anxiety from the stomatological intervention, that from the point of psychophysiological aspect may be considered as the state of the expecting danger.

For development of person and genesis of his fears, the treatment of parents toward children is important when they are in the phase of adolescence. Parents influence on children also by their example, positive or negative, and most often they represent for them identification figures¹⁰.

Since there are many dental and non dental informations concerning the connection between the fear and pain, in the literature there is still no quite clear difference between psychological and physiological factors which may influence on the patient and behaviour during the dental checkup¹⁰.

Literature concerning the dental anxiety shows continually that the high percent of individuals with fear obtained a negative experience in the childhood which contributed to development of the present fear. It is considered that feeling of helplessness alone for these patients is of crucial importance for origin of dental fear¹¹.

High role in control of fear in children from the stomatologist have, as it was already mentioned parents, which need to explain to children in daily conversation, why the visits to stomatologist are important. If in child exist the prejudices about stomatologists and dental pain there is an exceptionally difficult task. He must in a short time, in course of intervention to eliminate the fear which was accumulated for years. That will be more difficult if the first earlier contact with the stomatologist was unpleasant¹².

This study presents that taking of placebo therapy was of high affect on the fear from stomatological intervention in adolescents.

Manifestations of fear which were manifested by the change of activity of sympathetic nervous system, which is visible, as according to colour of the patient's skin, also in accordance with the characteristics of look, became less expressive by using of placebo.

NaF. Autor smatra da se placebo efekat prvenstveno ostvaruje na „očekivanja“. Ne treba zaboraviti da je na povoljan efekat placebo u ovim istraživanjima sigurno uticao i „sladak“ ukus tablete, jer je kod dece oživeo pamćenje na ranije doživljaje u životu u kojima je sladak ukus uvek bio „ukus prijatnosti“¹⁵.

Zaključak

Upotreba placebo terapi doprinela je smanjenju psihoemocionalne uznemirenosti adolescenata, što predstavlja značajan doprinos njihovom budućem odnosu prema stomatološkim intervencijama, a time i očuvanju oralnog zdravlja.

It's a question whether the adolescents by taking placebo considered does it affects on the parts of brain responsible for pain, as it is cited in other similar investigations¹³.

Observations similar to ours were presented by Apostolović¹⁴ studying the placebo effect on fear at stomatological treatment in children of younger school age, by applying as the placebo tablets NaF. Author considers that placebo effect is primarily realized in „expectations“. It is not necessary to forget that on satisfactory effect of placebo in these investigations influenced for sure also „sweet“ taste of tablet, because it revived in children memory on earlier experiences in life, when „sweet“ taste of tablet was always „pleasant taste“¹⁵.

Conclusion

Use of placebo therapy contributed to diminishing of psychoemotional disturbance of the adolescents, which presents an important contribution to their future relation toward stomatological interventions, and by that to preservation of oral health.

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