ARTCURE[®] DIFFUSIONAL**PATCH**

CLINICAL STUDY SUMMARIES 2016



PROVIDING SUPPORT FOR THE EXISTING TREATMENTS WITH MAGNETIC DIFFUSIONAL PATCHES AT DISC HERNIAS

CLINICAL STUDY CENTRE DIŞKAPI TRAINING AND RESEARCH HOSPITAL HEAD OF THE CLINICAL RESEARCH OP. DR. MEHMET SORAR

TOTAL NUMBER OF VOLUNTEERS SCREENED AT THE BEGINNING OF THE STUDY NUMBER OF VOLUNTEERS PATCHED DURING THE STUDY PLACEBO APPLICATION DURING THE STUDY

Average age of the patients who took part in the study was 41.90±8.52, BMI was 25.26±4.08, number of the disc hernia patients was 15, number of the extrude disc hernia patients was 25. All of the patients were the ones who were previously administered medicine as well as rest treatment and physiotherapy.

SYMPTOMS

Average VAS scores of the 40 patients intotal who were included in the study, before the treatment was 7.85 ± 1.39 . At the end of 24 hours, second VAS was reported as 3.15 ± 2.11 (P<0.001, Anova) with significant decrease and at the end of 48 hours, the third VAS was reported as 1.86 ± 1.65 (P<0.001 Anova) with significant decrease and the correlation between the second and the rhird VAS was reported as P<0.01 with significant decrease (Diagram 1). Such decrease does not show correlation with age and BMI (p>0.05, Pearson).

CLINICAL STUDY CENTRE DIŞKAPI TRAINING AND RESEARCH HOSPITAL HEAD OF THE CLINICAL RESEARCH OP. DR. MEHMET SORAR TOTAL NUMBER OF VOLUNTEERS SCREENED AT THE BEGINNING OF THE STUDY NUMBER OF VOLUNTEERS PATCHED DURING THE STUDY YEAR OF THE STUDY



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Diagram 1. Values of VAS Pain scores of the disc hernia patients at the end of 0, 24 and 48 hours.

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At the result of MRI imaging after 4 weeks, massive contraction is observed on the patients' herniated areas (Patient 1, 2, 3, 4, 5,6).

PATIENT 1



BEFORE





BEFORE

AFTER

PATIENT 2



BEFORE





BEFORE

AFTER

PATIENT 3



BEFORE

AFTER



BEFORE

AFTER

PATIENT 4



BEFORE



BEFORE

AFTER

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PATIENT 5



BEFORE

AFTER



BEFORE

AFTER

PATIENT 6



BEFORE

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BEFORE

AFTER

APPLYING PLACEBO

For ARTCURE $^{\circ}$ diffusional patch which had been applied on 40 healthy individuals in the age range of 45.40±5.20 (20-54), VAS scores before applying placebo was declared as

follows: 0 for VAS1, 0 for VAS2 and 0 for VAS3. No difference was observed during the neurological evaluations before and 48 hours after the study.

DETERMINING SHORT AND LONG TERM EFFECTS OF DIFFUSIONAL PATCH APPLICATION ON PAIN AND FUNCTIONAL CONSTELLATION ON THE PATIENTS WITH LUMBER DISC HERNIA

CLINICAL STUDY CENTRE YILDIRIM BEYAZIT ÜNİVERSİTESİ ANKARA ATATÜRK EĞİTİM ARAŞTIRMA PATIENTNESİ HEAD OF THE CLINICAL RESEARCH YARD.DOC.DR. ATIF AKSEKİLİ

his study will be presented at TOTBID congress which will take place on 25-30 October.

Our main goal in this study is to show Artcure Diffusional Patch's efficiency which is in hipoosmolar lipid structure and is made from the mixture of 6 different herbal oils, and to discuss this treatment's pros and cons compared to the surgical treatment.

METHOD

Our study includes 79 of 120 patients who have been clinically diagnosed with lumbar disc prolapsus. Clinic measurements were carried out according to the patients' protrusion and extrusion degrees shown on MRI images and to their dermatomal distribution of pain. Artcure Diffusional Patch (ADP) was applied to the treatment group and the placebo group was applied with Transdermal Diffusional Patch (TDP). Patients' functional capacities were measured with Oswestry Disability Index (ODI) scale and their pain density changes were measured with Visual Analog Scale (VAS) scale. Also to support these, criteria such as restriction degree of movement, Lasegue test, femoral extension test and paravertebral muscle spasm were used. Statistical analyses include Oswestry Disability Index, Visual Analog scale, patient satisfaction and duration of resuming their professional life.

During the first 1 month after the study, substantial improvement and positive developments were observed in the treatment group's pain degrees, Oswestry Disability Index values and Visual Analog scale. On the evaluations which were made 3 days after the application, treatment group's physical examination symptoms and improvements of the scores turned out to be much greater in statistical sense, compared to the control group.

INFERENCES

Compared to the placebo treatment, Artcure Diffusional Patch treatment proved substantial superiority on clinical scores, patient satisfaction, physical examination symptoms and duration of resuming their professional life for lumbar disc hernia patients with radiculopathy. According to these symptoms, Artcure Diffusional Patch treatment can be a good alternative for lumbar disc hernia patients with radiculopathy.

Table 1: The datas before and after application in the experiment group General Linear Model Repeated Anova (Wilks' Lambda)Post Hoc Test: LSD - Cochrans's Q Test - Post Hoc Test: nonparametrik posthoc test (Miller(1966) Average Values±Ss(standarddeviation), Median Range(Maximum-Minimum) ve n(%)

		Preoperative=I	3rd					
			Day=II	1st Month=III	P Value			
		N=40	N=40	N=40	1-11	1-111	11-111	General
ODI		59,2±13,37	44,8±15,61	33,4±10,13	<0,001	<0,001	<0,001	<0,001
VAS		9(10-3)	7(10-2)	5(10-2)	<0,001	0,042	0,016	<0,001
SLR	Positive	32(80,0)	16(40,0)	4(10,0)	0,001	<0,001		<0,001
	Negative	8(20,0)	24(60,0)	36(90,0)			0,016	
K-SI R	Positive	32(80 0)	16(40 0)	4(10 0)	<0 001	0 001		<0 001
N OLN	Negative	8(20,0)	24(60,0)	36(90,0)	-0,001	0,001		-0,001
Flexion	Normal	15(37.5)	25(62.5)	33(82.5)	0.019	<0.001	0.085	<0.001
	Disabled	25(62,5)	15(37,5)	7(17,5)	-/* • •	-,	-,	-,

		Preoperative=I	3rd Dav=II	1st Month=III	P Value			
		N=40	N=40	N=40	-	1-111	11-111	General
Extansion	Normal	17(35.0)	25(62 5)	2(80.0)	0 006	<0.001	0 1/8	~0 001
Extansion	Disabled	26(65,0)	15(37,5)	8(20,0)	0,000	-0,001	0,140	~0,001
Right Lateral	Normal	17(42,5)	28(70,0)	32(80,0)	0,003	<0,001	0,704	<0,001
Flexion	Disabled	23(57,5)	12(30,0)	8(20,0)				
Left Lateral	Normal	17(42,5)	28(70,0)	32(80,0)	0,003	<0,001	0,704	<0,001
Flexion	Disabled	23(57,5)	12(30,0)	8(20,0)				
Paravertebral	Disabled	40(100,0)	12(30,0)	8(20,0)	<0,001	<0,001	1	<0,001
muscle spasm	Yes	0(0,0)	28(70,0)	32(80,0)				
Femoral	Positive	31(77,5)	15(37,5)	6(15,0)	<0,001	<0,001	0,082	<0,001
Streching Test	Negative	9(22,5)	25(62,5)	34(85,0)				

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Table 2: The data before application and 3rd day after application in placebo group Independent T Test(Bootsrap) - MannWhitney U Test(Monte Carlo) - Fisher Exact Test (Exact)Average Values±Ss(standard deviation), Median Range(Maximum-Minimum) ve n(%)

		Placebo Preop	3rd Day	P Value	
ODI		61,8±11,42	52,2±12,5	<0,001	
VAS		8(10-3)	7 (10–2)	<0,001	
SLR	Positive	29 (74,4)	25 (64,1)	0,219	
_	Negative	10 (25,6)	14 (35,9)		
K-SLR	Positive	29 (74,4)	24 (61,5)	0,063	
_	Negative	10 (25,6)	15 (38,5)		
Flexion	Normal	17 (43,6)	18 (46,2)	1	
_	Disabled	22 (56,4)	21 (53,8)		

Table 2: The data before application and 3rd day after application in placebo group Independent T Test(Bootsrap) - MannWhitney U Test(Monte Carlo) - Fisher Exact Test (Exact)Average Values±Ss(standard deviation), Median Range(Maximum-Minimum) ve n(%)

		Placebo			
		Preop	3rd Day	P Value	
Extansion	Normal	17 (43,6)	18 (46,2)	1	
	Disabled	22 (56,4)	21 (53,8)		
Right L Flexion	Normal	16 (41,0)	18 (46,2)	0,500	
	Disabled	23 (59,0)	21 (53,8)		
Left L Flexion	Normal	17 (43,6)	19 (48,7)	0,500	
	Disabled	22 (56,4)	20 (51,3)		
Paravertebral muscle	Yes	30 (76,9)	21 (53,8)	0,004	
spasm	No	9 (23,1)	18 (46,2)		
Femoral Strecthing Test	Positive	27 (69,2)	20 (51,3)	0,016	
	Negative	12 (30,8)	19 (48,7)		

CLINICAL STUDY CENTRE YILDIRIM BEYAZIT UNIVERSITY ATATURK TRAINING AND RESEARCH HOSPITAL ORTHOPEDICS, BRAIN AND NERVE SURGERY, PHYSIOTHERAPY AND REHABILITATION DEPARTMENTS HEAD OF THE CLINICAL RESEARCH

ARTCURE DP

OP. DR. ATIF AKSEKİLİ

TOTAL NUMBER OF VOLUNTEERS SCREENED AT THE BEGINNING OF THE STUDY 129 NUMBER OF VOLUNTEERS PATCHED DURING THE STUDY 40 PLACEBO APPLICATION DURING THE STUDY 40 YEAR OF THE STUDY 2015





PLACEBO*

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ARTCURE DP 70 60 50 40 30 20 10 0 ODI ODI ODI **Before Artcure 3rd Day After 1st Month After** Application Application and **Application of**

PLACEBO*

70 60 50 *Because the placebo group 40 did not show any pain decrease, 30 individuals were transferred to 20 another treatment and the 1. Month 10 evaluation couldn't be performed. 0 ODI ODI **Before Application 3rd Day After** Application

PLACEBO*

DIFFUSIONAL PATCH'S EFFECT ON PAIN AND FUNCTIONAL CONSTELLATION DURING LUMBER DISCOPATHY TREATMENT.

CLINICAL STUDY CENTRE EGE UNIVERSITY MEDICAL FACULTY DEPARTMENT OF NEUROSURGERY HEAD OF THE CLINICAL RESEARCH PROF. DR. MEHMET SEDAT ÇAĞLI

AIM

The transdermal diffusional patch (ArtcureDP) is a novel transdermal patch of plant origin, based on essential oils, that works through diffusion. The purpose of this prospective, open label study was to examine the effect of the 'diffusional patch' on pain and functional status in the treatment of lumbar discopathy.

METHODS

This study was designed to include 60 patients, aged 24-80, with lumbar disc herniation. The Artcure patch was attached to the lumbar region with a hypoallergenuic plaster, and 24-h bed rest was advised. Patients received no other treatments for 24 h. The clinical researchers removed the patch the following day. The neurological examinations were performed before treatment; 24thhour, 48th hour and first month after treatment including straight leg raise test, muscle strength, sensorial status, reflexes, range of motion at flexion, extension, lateral bending and rotation. Paravertebral spasm was also recorded if presented. Severity of pain was assessed using a visual analogue scale (VAS) and functional status using the Oswestry disability index (ODI).

RESULTS

After the patch application the mean VAS scores were decreased statistically significantly. The range of motion in flexion was statistically significantly increased in all three assessments after treatment. Straight leg raise test was positive in 26 patients before treatment, after treatment at the first month only 14 patients were positive for straight leg raise test; this change was statistically significant. The patch treatment resolved paravertebral spasm statistically significantly. Also, decrease in ODI scores following patch application was statistically significant. Control MRI at the first month revealed disc shrinkage in 10 patients (16.7%), and the degree of shrinkage observed was statistically significant.

CONCLUSIONS

The results of this study revealed that the transdermal diffusional patch (ArtcureDP) application caused statistically significant amelioration in pain scores and clinical condition of the patients. Furthermore, this treatment caused a statistically significant shrinkage of disc. In conclusion, the hypo-osmolar diffusional transdermal patch (Artcure) can be used in the treatment of patients with protruded, extruded and fragmented disc hernias. Table 1: The results of the clinical assessments.

Variable	Pretreatment	24th hour	48th hour	1st month	p-value
VAS	8 (3-10)a,b,c	6 (1-9)a,d,e	3 (0-9)b,d,f	1.5 (0-5)c,e,f	<0.001†
ROM-Flexion	49 (81.7%)b,c	54 (90.0%)	58 (96.7%)b	58 (96.7%)c	<0.001‡
ROM-Extention	54 (90.0%)	58 (96.7%)	58 (96.7%)	56 (93.3%)	0.062‡
ROM-Rotation	58 (96.7%)	58 (96.7%)	58 (96.7%)	60 (100.0%)	0.112‡
ROM-Lateral Bending	57 (95.0%)	57 (95.0%)	57 (95.0%)	57 (95.0%)	1.000‡
SLR – positivity	26 (43.3%)a,b,c	14 (23.3%)a	10 (16.7%)b	14 (23.3%)c	<0.001‡
PVS – positivity	39 (65.0%)a,b,c	47 (78.3%)a,e	47 (78.3%)b,f	22 (36.7%)c,e,f	<0.001‡
Muscle strength	5 (4-5)	5 (4-5)	5 (4-5)	5 (4-5)	0.074†
Sensorial evaluation	5 (8.3%)	2 (3.3%)	5 (8.3%)	2 (3.3%)	0.083‡
ODI	54 (32-74)a,b,c	50 (20-61)a,d,e	42 (20-60)b,d,f	36 (18–54)c,e,f	<0.001†

† Friedman test, ‡ Cochran's Q test, a: The change between pretreatment and 24th hour is statistically significant (p<0,0083), b: The change between pretreatment and 48th hour is statistically significant, c: The change between pretreatment and 1st month is statistically significant (p<0,0083), d: The change between 24th hour and 48th hour is statistically significant (p<0,001), e: The change between 24th hour and 1st month is statistically significant (p<0,001), f: The change between 24th hour and 1st month is statistically significant (p<0,001), f: The change between 48th hour and 1st month is statistically significant (p<0,001). VAS: visual analogue scale, ROM: range of motion, SLR: straight leg raise, PVS: paravertebral spasm, ODI: Oswestry disability index.

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CLINICAL STUDY CENTRE EGE UNIVERSITY MEDICAL FACULTY DEPARTMENT OF NEUROSURGERY HEAD OF THE CLINICAL RESEARCH PROF. DR. MEHMET SEDAT ÇAĞLI TOTAL NUMBER OF VOLUNTEERS SCREENED AT THE BEGINNING OF THE STUDY NUMBER OF VOLUNTEERS PATCHED DURING THE STUDY YEAR OF THE STUDY







ARTCURE DP

SHORT AND LONG TERM EFFECTS ON PAIN AND FUNCTIONAL CONSTELLATION OF ARTCURE DIFFUSIONAL PATCH APPLICATION ON PATIENTS WITH LUMBER DISCOPATHY.

CLINICAL STUDY CENTRE

ANKARA TRAINING AND RESEARCH HOSPITAL AND HACETTEPE UNIVERSITY DEPARTMENT OF PHYSIOTHERAPY HEAD OF THE CLINICAL RESEARCH PROF. DR. PINAR BORMAN

This study was presented at 4th World Congress On Controversies, Debates And Consensus in Bone, Muscle And Joint Diseases (BMJD), in Spain, during 20–22 October.

THE EFFICACY OF A TRANSDERMAL HERBAL PATCH (ARTCURE®) IN THE TREATMENT OF LUMBER DISC HERNIATION: A RANDOMİZED PLACEBO-CONTROLLED CLINICAL and MR IMAGING-based STUDY Pinar Borman MD, Seçil Vural MD, Pelin Kavak MD, Burcu Duyur Çakıt MD, Barış Nacır MD, Aynur Karagöz MD University of Hacettepe Faculty of Medicine Dept of PMR, *Numune Training and Research Hospital, Clinic of Radiology**Ankara Training and Research Hospital Clinic of PMR, Ankara, Turkey

BACKGROUND / AIM

Low back pain due to lumbar disc herniation (LDH) is common in our routine practice. Artcure® is a recently developed transdermal patch comprising a mixture of 6 herbal oils, which has been shown to reach to the bulged out herniated disc and decrease the volume of HNP, reduce the nerve root irritation and relieve the pain (1). After wrapping the Artcure® patch to the LDH area, absolute bed rest is necessary for 24 hours. Then the patient take off the patch and turn back to routine daily activities. The product has been on the market and used among LDH patients since a few years. The aim of this randomized placebo controlled study was to investigate the effects of Artcure® patch in the treatment of LDH, with regard to pain, functional status and magnetic resonance imaging (MRI) findings.

METHODS

Patients with low back pain due to LDH were recruited to the study. Demographic and clinical variables were recorded and patients were randomly assigned (2:1) to either Group1 with Artcure[®] patch or Group2 with placebo patch. The primary outcomes were the pain by VAS, functional disability assessed by Oswestry Disability Index (ODI) which were assesed at baseline, 48 hours later and at the end of second month; the secondary outcome measures were changes in the size of HNP assessed by sagittal and axial MR images at baseline and at the end of two months.

RESULTS

The demographic and clinical variables were similar between the groups (Table 1). Immediately after the treatment patients in both groups experienced improvements in VAS and ODI scores, appearing more significant in Group1 than in Group2. But the difference remained significant only in Artcure patch group at second month follow-up. The size of HNP visualized by MRI, were found to be decreased at 2 months follow-up in Group1 (Table 1). No serious adverse events were observed.

CONCLUSION

Artcure® herbal patch has favorable effects on pain and functional disability both in the early period and late period (up to 2 months) of lumbar HNP, compared to placebo. It has also reduced the size of HNP, as visualized by MRI. Artcure® patch may be a non-invasive, practical, safe and longlasting alternative therapy in patients suffering from low back pain due to LDH.

KEY WORDS

LBP, herniated nucleus pulposus, herbal patch, treatment

Table1: The demographic, clinical and imaging variables in both groups

	Group 1	Group2	р
	n=34	n=17	
Age (years)	45.14±10.13	43.7±10.06	>0.05
Gender (female/male)	28.15±3.92	28.86±3.47	>0.05
BMI (kg/m²)	15/19	7/10	>0.05
Duration of disease (months)	21.7±27	18.29±	>0.05
Pain by VAS			
Baseline	6.1±1.5	5.8±1.7	
At 48 hr	4.7±1.5*	5.2±2.4*	
At 2 months	4.4±1.8*	6.1±1.5	<0.05
Oswestry disability index score			
Baseline	51.1±15.4	55.2±15.4	
At 48 hr	44.1±14.2*	49.4±14.9*	
At 2 months	33.8±15.3**	48.2±13.4	<0.05
HNP size by axial image (mm)			
Baseline	37.6±1.65	37.5±1.9	
At 2 months	35.8±1.83*	37.7±2.0	
HNP sizeby sagittal image (mm)			
Baseline	38.9±1.7	39.3±2.0	
At 2 months	37.46±1.9*	39.3±2.2	<0.05

*inter- group difference between baseline and after treatments, $p\!<\!0.05$

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TOTAL NUMBER OF VOLUNTEERS SCREENED AT THE BEGINNING OF THE STUDY 80 NUMBER OF VOLUNTEERS PATCHED DURING THE STUDY 34 PLACEBO APPLICATION DURING THE STUDY 17 YEAR OF THE STUDY 2016









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PRESENTATIONS, STUDIES

Disclosure of Interest: None declared

a higher concentration was observed for substance P (P Conclusion: The contralateral (from RHP to LHP) weight shift observed at D7 only in the NC group, and not with snit observed at U1 only in the two group, and not with rytvela and PC, is indicative of a higher level of discomfort in this group. Morever, both treated groups presented n uns yroup, worover, oun ueated groups presented a lower sensory allodynia manifested through PV/T, which was confirmed by the changes in neuroproteomics. was commend by the changes in neuroprotections, particularly for PC. These results suggest the implication personanty for FC. These results suggest the implication of pytela to prevent subsequent development of OAof ryviela to preven subsequent development of provide and PC related central sensitization. If both ryvela and PC teatment had similar functional effects, it is interesting to resument had similar functional elects, it is interesting to note that the observed differences on neuroproteomics note that the observed anterences on neuroprocednics highlight different mechanisms of action for both

ncoels were applied for statistical analysis. Results: There was no significant group effect on static veight bearing. However, at D14, 101,10 TA rats put weight bearing, nowever, at D14, 101.00 (A rats put statistically significant lesser % body weight (%EW) on statistically significant lesser % body weight (%BW) on the right hind paw (RHP) than PC group (P = 0.023), and the right hind paw (RHP) than PC group (P = 0.023), and subsequently 101.10 TA was similar to PC group. On the subsequently 101,10 IA was similar to PC group. On the contralateral left hind paw (LHP), at D7, both 101,10 TA contraisteral left ning paw (LHP), at Ur, both 101-10 IA and PC groups reported less %BW than NC (P < 0.01). and HC groups reported less yeavy than NC (F < 0.01). Punctate tactile allodynia evaluation revealed that Punciate tactue allodynia evaluation revealed mat treatment with rytvela and PC resulted in a higher PWT resument with ryvera and PC resulted in a higher PWT compared to the NC group (P < 0.0001). Post-hoc compared to the NC group (P < 0.0001). Post-hoc analysis confirmed the absence of difference in PWT analysis contirmed the absence of amerence in PWI between rytvela and PC, and a significantly increased pervises tryvels and ro, and a significantly increased performing three and ro, and a significantly increased performing the second se PWT in tylvela vs. No at DT (T = 0.016) and Do (T < 0.001). On the LHP, rats treated with tylvela and PC 0.001). On the LHP, rats treated with rytveta and PC showed a higher PWT, which was statistically different showed a higher PW I, which was statistically directed that NC (P < 0.000 f). Pain neuropeptide quantification than NG ($P \le 0.0001$). Pain neuropepade quantinization allowed to detect changes occurring at spinal level by anowed to detect changes occurring at spring level by typela medication, with an up-regulation of bradykinin (P Solvera medication, with an up-regulation or brack/min (P $_{\rm 2.0,001}$ and met-enkephalin (P <0.001) compared to the U.UU1) and met-enkephalin (V < U.UU1) compared to reit NC group. In PC group, compared to NC, a decrease in No group. In Ho group, compared to No, a descrease in substance P (P = 0.003), endomorphin-2 (P = 0.009) and substance P'(P' = 0.003), endomorphin-2 (P = 0.003) and an increase in bradykinin (P dynorphin-A (P = 0.012), and an increase in bradykinin (P uynuyniii -A (r = 0,012), anu an maease in urauykinin (P = 0,001) were observed. In 101.10 TA, compared to PC,

subcutaneous daily administration; and for the Negative subcutaneous daily administration; and for the Negative Control (NC) group a placebo once-a-day. After a 2 week control (NC) group a placebo once-a-day. After a 2 week acclimatisation period, functional assessments of pain, acolimatisation period, functional assessments or pain, including spontaneous (static weight bearing using an including spontaneous (static weight bearing using an Incapacitance meter) and reflexive (paw withdrawal incepacitance meter) and rettexive (paw withdrawal threshold -PWT- using an electronic von Frey threshold -PW1- using an electronic von rrey anaesthesiometer) methods, were performed at D-1* anaesthesiometer) methods, were performed at U-1" (Baseline), D7*, D14, D21*, D35, D49 and D56* (*only Baseline), D/, U14, U21, U35, U49 and U55 (rony time-points for Placebo), Histopathological scores (medial une-points for Placetou), rusiuparnological subres (necasi and lateral tibla) as well as spinal neuropeptides and lateral tibla) as well as spinal neuropeptides quantification were performed after sacrifice. Mixed

Under MR images at baseline and at the end of two Results: The demographic and clinical variables were Nesults: The beinographic and currical variables were similar between the groups (Table 1). Immediately after similar between the groups (rable 1). Immeutately aner the treatment patients in both groups experienced the treatment patients in both groups experienced improvements in VAS and ODI scores, appearing more inprovements in VAS and UUI scores, appearing more significant in Group1 than in Group2. But the difference significant in Group I man in Group. Out the dimension remained significant only in Arcure patch group at second nemanieu symmoun ony in Anoue parai group a secono month follow-up. The size of HNP visualized by MRI, were nunin rollow-up. The size of HNP visualized by NRT, were found to be decreased at 2 months follow-up in Group1 ivuina na ne nentessen er a mannes innovena in aran (Table 1). No serious adverse events were observed.

Indings. Methods: Fifty-one patients with low back pain due to Interious: Fing-one patients with now back pain due to LDH were recruited to the study. Demographic and LUN were recruited to the study. Demographic and clinical variables were recorded and patients were clinical variables were recorded and patients were randomly assigned (2:1) to either Group1 with Artcure® uniconiny assigned (c.1) to entire Group1 with Attained patch of Group2 with placebo patch. The primary paich or Groupz with placebo patch. The primary outcomes were the pain by VAS, functional disability outcomes were the pain by VAS, functional useaniny assessed by Oswestry Disability Index (ODI) which were assessed by Usivesity Urabumy more (UUU) which were determined at baseline, 48 hours later and at the end of determined at usseline, 40 nouts later and at the end of second month. The secondary outcome measures were second monan. The secondary outcome measures were changes in the size of HNP assessed by sagittal and axial

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A Karagoz Det of Anker Trainer Reserver Medical Faculty. Tubucanit Canage Trainer Reserver Hospital "Spinity. Tubucanit Canage and Reserver Hospital. "Dept of Pure, Ankere Training and Reserver Hospital, Arkanit, Turkey Problem Statement: Low back pain due to lumbar disc

P. Borman", S. Vura?, P. Kavak³, B. D. Çakıt⁴, B. Nacır⁴,

LUMBER DISC HERNIATION: A RANDOMIZED PLACEBO-CONTROLLED CLINICAL AND MR

THE EFFICACY OF A TRANSDERMAL HERBAL PATCH (ARTCURE®) IN THE TREATMENT OF LUMBER DISC HERNIATION: A RANDOMIZED

PO7 THE EFFICACY OF A TRANSDERMAL HERBAL

Disclosure of Interest: None declared

Networks 1 Duran 2020 of stradeg wated based on protein sequence by the reaction of stradeg wated and compression on pro-ty the reaction of stradeg water and the stradeg and the terminal sequence of the stradeg water and the stradeg and the stradeg water and the stradeg and the stra

Conclusion: Aricure® herbal patch has favorable effects conclusion: Ancuree nerbal parch has have aure encode on pain and functional disability both in the early period on period and atter period (up to 2 months) of lumbar HNP, and have period up to 2 months) or number river, compared to placebo (thas also reduced the size of HNP, compared to placebo, in has used to use of the side of mini-as visualized by MRI. Arcure® patch may be a nonas visualized by MMI. Ancuree parati may be a mar-invasive, practical, safe and long-lasting alternative invasive, practical, sate and iong-lasting antenative therapy in patients suffering from low back pain due to



measurements were obtained using mage ... nyw waa defined as the angle between the longitudinal axis of the denned as the angle between the longitudinal axis of the halfux, metafarsal and the proximal phalange of the halfux, neasureo using a goniometer. A self-report questionnaire was used to classify feet into metatarsal and the proximal measured using a goniometer. A senteport quessionneire was used to creating rear mut two groups: "with" and "without" forefoot pain. Betweentwo groups: "with" and "without" torefoot pain. Between group differences in HVA, SRA, and THA were evaluated group amerences in riva. Sra, and ina were evaluated using the Mann-Whitney U test. Stepwise, multivariate using ine Mann-Whillney U test. Stepwise, mutivanate logistic regression analysis was used to identify the ngiailic regression analysis was used to identify the Independent association between each factor (HVA, moepenuent association between each lacour (mva, SRA, and TAH) and forefoot pain. Additionally, SKA, and IATI) and Urelow pant. Avanuality, multivariate logistic regression analyzes were performed inunvariate waraw regression anaryzes were versionned to evaluate the specific relationship between SRA and to evaluate the specific relationship between SKA and foregoing for covarying factors. The rorenoon pain, aquissing un ovverying revues. The dependent value for multivariate logistic regression dependent value for multivariate roginauc regre analyzes was forefoot pain (No pain = 0, Pain = 1). anaryzes web ioteroor pain two pain - o, rant - 1) Results: The SRA was larger among feet classified "with" **Negative:** The other was larger anionity liest usasing while pain than in those "without pain (p = 0.03). On stephysics the particular term of the pain in the painting term of term of term pani unari ni unosu murour pani tu - u.us), uri atelymas mutitoariate logistic regression (model 1), SRA was nuuvanane vugieur, regression (moder 1), Srxa was identified as an independent predictor of forefool pain

cause of forefoot pain. Less is known about the contributions of sesamoid bornes and of the transverse controlutions of sesamold bones and of the transverse arch, which play an important role in the verifyin-bearing function of the travience metabolic to be a memory of transmisarch, which play an important role in the weight-bearing function of the foot and are likely to be a source of forefoot ion of the foot and are likely to be a source or foremost The aim of this study was to evaluate the pain. The aim of this study was to evaluate the relationship between forefoot pain and specific features of relationship between torefoot pain and specific features of the forefoot construct, namely the hallux valgue angle the forefoot construct, namely the hallux valgus angle (YVA), sesamoid rotation angle (SRA), and transverse arch haom (TALI) in the weight wearen two arch height (TAH) in the weight-bearing foot. Mathods: The study group consisted of 277 women (contributing 547 feet), 9375 ± 113 years old. The nearing of second house and of ne head of ne contributing 547 feet), 37.5 \pm 11.3 years old. The positions of sesamoid bones and of the head of the positions or sesancia pones and or the near or the second and fifth metabarsal heads were identified using a second and min metatarisal heads were dentined using a weight-bearing ultrasound device shown in Figure. The weight-bearing untascund device shown in Figure. The SRA was defined as the angle formed by a line passing SKA was defined as the angle tormed by a line passing through the medial and the lateral sesamoid bones and through the medial and the lateral sesamoid bones and the horizontal line. The TAH was defined as the length of the honzontal line. The TAH was defined as the length of the line perpendicular from the second metatarsal head to the line perpendicular from the second metatarisal nead to a line passing through the medial sesamoid bone and the a line passing through the medial sesamoid bone and the and fifth motatarial head. The SRA and THA measurements were obtained using image 1.11VA was defended as the second business of

K. Matsubara", D. Matsunolo", S.: Tabasa", S. Anorma". T. Aogonna Kiçob University, Kyolo, 1Ko University, Kitakatsuraçığun, 1 Xaba University, Yokohama, Japan Problem Statement: Forefoot pain is a common Problem Statement: Foreloot, pain is a common complaint. The mechanisms that leads to forefoot pain are complaint. The mechanisms that leads to forefoot pag and re considered to be related to anatomical variations of the considered to be related to anatomical variations of the forefood, such as hallur values, which is a value recognized wave of toreford nam (see is known around mo forefool, such as hallux valgus, which is a well-recognized cause of forefool pain. Less is known about the contributione of escannoid known and of the termination

PORFOOT PAIN CORRELATES WITH THE SESSMOOD WAR ANGLE EVALUATED BY Matsubara", D. Matsumoto", S. Tasaka¹, S. Morino³,

Declared as verbal presentation during 15. International Multidisciplinary Symposium on Drug Research & Development which took place on 15-17 October.

mt sağlık ürünleri

INTERNATIONAE MULTIDISCIPLINARY SYMPOSIUM DRUG RESEARCH & DEVELOPMENT NEW TREATMENT METHOD BASED on GRADIENT ACQUIRED by the NEW TREATMENT METHOD BASED on GRADIENT ACQUIRED by G REDUCTION of INTRA-DISC DENSITY and OSMOTIC PRESSURE in DISC HERNIAS Tredment of the Disc Herrise consists of non-steroid ent-inflammatory drugs, and muscle relaxaris, Treatment of the Disc Herrises consists of non-steroid sub-inflammatory drugs, and muscle relaxards, epidaral stocid injections, physical thereautic approaches like TENS and thereapeutic ultrasound, and sargery. Many patients we resolved by the conservative approaches, decides some of them require epidaral steroid injections, physical therapoutic approaches like TENS and therapoutic ultrasound, and sweety. Many painets are resolved by the conservative approaches, decides some of them require ar areal management. SE geal management. Our new non-invesive treatment method is a novel geleraic based therapeutic approach. It is a trans-dermal diffusional oright (TADP), releasing active inspectient to the involved segment directly. Ge Our new non-invasive treatment method is a novel geleric based therapeutic approach. It is a trans-dema diffusional path (TdDP), releasing active ingredient to the involved segment directly. Gel content is composed of mainly 6 different oil. Product components that reach the much methods and demal diffusional path (TdDP), releasing active ingedient to the involved segnent directly. Ge content is composed of mainly 6 different oil Product components that reach the markets papons by the transformal path carrier cause a considerable decrease on the weight of the herein review content is composed of mainly 6 different al. Product components that reach the minimum papeous by the transformal paids, carrier cause a considerable decrease on the weight of the herria randeus minimum which containe %20 of water her lating the water off the randeus minimum. The decreased the transformal patch carrier cause a considerable decrease on the weight of the herris randous pulpons, which contains %20 of water by letting the water off the randous pulpons. The decreased madeus raincaus and/ies lowered creasure on neural root and senal canal itself. C consecuently, the pulposus, which contains %80 of water by letting the water off the nucleus pulposus. The decreased nucleus pulposus applies lowered pressure on new a root and spinal canal itself. Consequently, the patient's ache significant/preduces patient's ache aiguificently reduces. The system that provides the mechanical effect is the re-formed lipid molecules inside the patch. Disc, have no vaccular ordern is not a blood feet is one which feet he diffusion. Then which contains a The system that provides the mechanical effect is the re-formed lipid molecules inside the patch. Disc, having no vascular system, is not a bloodfed tissue which fed by diffuid on. Disc which contains a idlr-like interior has a semi-normeable outer wall. Permeabilitr is increased at disc section that is tree basing no vascular system, is not a bloodfed tissue which fed by diffusion. Disc which contains a july-like interior has a semi-permeable outer wall. Permeability is increased at disc section that is to a discussion of deformed him here a formed live d moleculae invide the notch micrate TATP jelly-like interior has a semi-permeable outer wall. Permeability is increased at disc section that is tore or deformed by hernia and thas allows the reformed lipid molecules inside the patch migrate. TaDP shall not so through the healthy disc with a non-deformed outer wall (non-Herria) an it only effects or deformed by hemia and this allows the reformed lipid molecules inside the path mig de. T(DP shall not go through the healthy disc with a non-deformed outer wall (non-Herria) so, it only effects on hemia zone. After migration of the reformed low-density limit molecules to the Herria rome the shall not go through the healthy disc with a non-deformed outer wall (non-Herria) so, it only effects on herria zone. After migration of the reformed low-density lipid molecules to the Herria zone, the ostemic ressure over the herria disc drons down and the density and viscosity of the herria disc zone on berria zone. After migration of the reformed low-density lipid molecules to the Herria zone, the osconic pressure over the berria disc drops down and the density and viscosity of the berria disc zone decreases in relative with the surrounding tissues. The bipnosmalic ligit in the herris disc deduced ostomic pressure over the herria disc drops down and the density and viscosity of the herria disc zone decreases in relative with the surrounding lissues. The tripoormatic liquid in the herria disc deplaces towards the relatively, isperognatic surrounding tissue. Accordingly, together with its weight, herris decreases in relative with the surrounding lissues. The hipoosmatic liquid in the herria disc deplaces lowards the relatively hiperoanatic surrounding lissue. Accordingly, logether with its weight herria disc's pressure over neural lissue reduces. disc'e pressure over neural tissue reduces. In conclusion, with all these aspects, transdermal diffusional patch is a nominvasive method prior to the surpleal intervanian the surgical intervention.

DETERMINING SHORT AND LONG TERM EFFECTS OF DIFFUSIONAL PATCH APPLICATION ON THE PATIENTS WITH CERVICAL DISC HERNIA.

CLINICAL STUDY CENTRE YILDIRIM BEYAZIT UNIVERSITY ATATURK TRAINING AND RESEARCH HOSPITAL HEAD OF THE CLINICAL RESEARCH OP. DR. ATIF AKSEKILİ ORTHOPEDICS, ASSISTANT PROFESSOR NO 26379996/151 DATED

NO 26379996/151 DATED 03/09/2014 (the letter from Ethics Committee only) APPROVAL OF MINISTRY OF HEALTH 2015-MDD-CE-00160 PROTOCOL NO CERVICAL_AP_ORT/FTR/BC_140606 INFORMED VOLUNTEER CONSENT FORM CERVICAL_BGOF_ORT/FTR/BC_140606-06.06.2014

CASE REPORT FORM VERSION NUMBER CERVICAL_HTF_ORT/FTR/BC_140606 DATE 06.06.2014

ONGOING STUDY

http://kap.titck.gov.tr/Home/Arastirmalar?aramatext=patch&rbgrup=2

EXAMINATION OF THE RESULTS OF ARTCURE DIFFUSIONAL PATCH APPLICATION DURING THE TREATMENT OF RADICULOPATHY CAUSED BY LUMBER DISC HERNIA

CLINICAL STUDY CENTRE BASKENT UNIVERSITY ANKARA HOSPITAL

HEAD OF THE CLINICAL RESEARCH

OP. DR. ERKİN SONMEZ BRAIN AND NERVE SURGERY, ASSISTANT PROFESSOR

DECISION NO 15/08

TARİH 23/01/2015

APPROVAL OF MINISTRY OF HEALTH NO 2015-MDD-CE-00161

PROTOCOL VERSIONNO 2.0 TARİH 04.12.2014 CERVICAL_BGOF_ORT/FTR/BC_140606-06.06.2014

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CASE REPORT FORM(ORF) (VARSA) VERSION NUMBER 1.0 DATE 13.01.2015

ONGOING STUDY

http://kap.titck.gov.tr/Home/Arastirmalar?aramatext=artcure+&rbgrup=2



PROVIDING HYPO-OSMOLAR CONDITION WITH DIFFUSIONAL TRANSDERMAL PATCH SUPPRESS DEGENERATED INTERVERTEBRAL DISC-INDUCED PAIN POSSIBLY VIA TRANSIENT RECEPTOR POTENTIAL VANILLOID IN RABBITS

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AIM

The aim of this study was to evaluate effects of a hypoosmolar diffusional transdermal patch containing natural essential oils as a transdermal penetration enhancer against IVD degeneration-induced pain in rabbits. Materials-Methods: Rabbits underwent IVD degeneration

with an annular stab surgical technique and were randomly assigned to sham (n=25), sham +transdermal patch (n=20), IVD degeneration (n=25), IVD degeneration +transdermal patch (n=27), and IVD degeneration +transdermal patch +ruthenium red, a transient receptor potential vanilloid (TRPV) antagonist (n=20), groups. The patch was taped on the animal's back for

24 hours at 4 weeks post-surgery. Ruthenium red was injected intraperitoneally at 1 hour before the patch was applied. Pain was assessed by the grimace scale, and IVDs were harvested at 5 weeks post-surgery, being analyzed by the measurements of density and viscosity and immunohistochemical staining. Results: Pain score was significantly worse in the IVD degeneration group, and was significantly improved by the patch, which significantly decreased density, viscosity and cellularity associated with proapoptotic cleaved-caspase-3 activation in the degenerated IVD. Ruthenium red abolished the patch's effects.

CONCLUSION

Providing hypo-osmolar condition with diffusional transdermal patch may be a new non-surgical treatment against IVD degeneration-induced pain by decreasing viscosity, density and increasing proapoptotic effect possibly via TRPV.

KEYWORDS

Intervertebral disc, Pain, Rabbit, Transdermal patch

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