

IS THE TRADITIONAL KURDISH MALE BELT A PREVENTIVE OF LOW BACK PAIN AND SCIATICA?: A CASE CONTROL STUDY

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ABSTRACT

Background: Low back pain (LBP) is a common complaint in general practice. There are conflicting reports about the benefit of supportive belts in the treatment and prevention of LBP. The aim of this study is to identify any possible preventive effect of the traditional male Kurdish belt (Shetec) on LBP and sciatica.

Method: A case-control study was designed. A specially designed questionnaire was developed and filled for participants in Duhok governorate in the Kurdistan region of Iraq. Cases were patients presented with LBP, while control was aged-matched (± 5 years) apparently healthy individuals who had no LBP at least in the previous 10 years. Statistical Package for the Social Sciences (SPSS) was used for data management. Chi-square, Fisher's exact, was used for calculation of the statistical significance. The mean, standard deviation (\pm SD), and Odd ratios were used with some clinical and general criteria.

Results: A total of 149 cases and 100 controls were participated in this study. The mean ages of cases and controls were 51.4 (± 13.28) and 59.22 (± 12.6), respectively. The mean duration of LBP among cases was 5.54 years (± 6.17), with 47% of them have pain radiating to the leg, and around 42.9% had involved in the sciatic nerve. None of the controls had LBP or sciatica. The habit of wearing Shetec was significantly negatively associated ($P < 0.001$) with the absence of LBP with an Odd ratio of 0.23. The study also found that the period and duration of wearing Shetec per day were significantly longer ($P < 0.001$) in controls in comparison to cases. Finally, the Shetec was almost completely protective for sciatica among cases.

Conclusion: Traditional Kurdish male belt (Shetec) is highly protective for LBP and Sciatica.

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Keywords: LBP, Sciatica, Supportive belt and Shetec

Low back pain is a very common health problem worldwide especially in the low and middle-income countries. The LBP may be acute or chronic in nature caused by several medical conditions. The majority of acute low back pain is mechanical in nature due to sprains and strains. Chronic LBP, on the other hand, is most commonly attributed to sciatica, which a radiculopathy condition caused by

compression, inflammation and/or injury to the spinal nerve roots¹⁻⁶.

In the USA about half (55%) of LBP cases were due to sciatica⁷. Such patients cannot be involved in leisure and sports activities, in addition to the sleeping disturbances, which lead to anxiety and depression⁸.

The LBP has been associated with obesity, aging, posture, lifting heavy material, sudden movements, and psychological

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factors. The health care system should develop and provide challenges to educate the patients on the prevention of LBP by reducing weight, special movements in lifting heavy material (squatting), and increase physical activity levels^{9,10}. Recently, psychological factors have been incriminated to contribute to the etiology of LBP^{11,12}. A new study found that the patients were more satisfied if the physiotherapy was combined with psychological support^{9,13}.

Different health care treatments have been used, including chiropractic, physiotherapy, complementary, and alternative medicines therapies. People with LBP believed that they would become better and more satisfied with chiropractic therapy, but researchers found that this has not relieved the patient's pain for a long time^{14,15}. However, chiropractic therapy is considered one of the most popular and comfortable management of LBP disorder in male patients who have high income and those who do not want to use medications for treatment^{1,16}.

Supportive belts have been used frequently in the management and prevention of LBP. The results from different studies gave conflicting results for its benefit in relieving and reducing pain or preventing LBP¹⁷⁻¹⁹. A traditional Kurdish belt (Shetack) has been used for generations by males as an accessory for traditional Kurdish clothes. This belt is composed of textile material from 6 to 10 meters with or without nodes. Nowadays, few people are wearing traditional clothes and the belt as new Kurdish generations are affected by the globalization of a new style of fashion.

The aim of this study is to measure any possible preventive effect of traditional male Kurdish belt on LBP and sciatica.

MATERIAL AND METHODS

A case-control study was designed. Scientific and ethical approvals were obtained from the University of Duhok, College of Medicine, and Duhok General Directorate of Health. A total of 149 male cases and 100 controls were collected. The study took place in the orthopedic department of the emergency teaching hospital in Duhok, Kurdistan region of Iraq, between June 2017- June 2019. The cases were patients presented with LBP for more than 6 months. All were examined clinically by a specialist orthopedic surgeon for the presence of sciatica using a straight leg raising test.

Controls were selected from relatives accompanied by patients and employees of the hospital. All gave no history of LBP for at least 10 years. The cases were age-matched (± 5 years) with controls. All controls were also examined clinically for sciatica by the same specialist.

A specially designed questionnaire was developed and filled for cases and control. In addition to the general information regarding age, occupation, the habit and period, and hours per day of wearing Shetack were asked. Also, data were collected regarding the duration of the pain, radiation of the pain to the leg, the severity of the pain, and limitation activity. The weight and height were measured for cases and controls for calculation of BMI. All were weighted with a light clothed and with no shoes. Involvement of Sciatica was stated as yes or no in the questionnaire after the clinical examination.

Furthermore, the Sheteck is two types Badinani and Sorani. The Badinani has a textile length of about 7-10 meters with 1-1.5 meters width. The textile then folded into around 5 cm folds and put in layers, usually arranged with nodes, starting from just above the umbilicus going down to the upper margin of the ilio-sacral joint with a width of about 20 cm. (figure1). The Sorani type of belt is similar but with a shorter textile length not exceeding 6 meters arranged with no nodes and usually wear from umbilicus going downs to almost 15 cm. (figure 2)

Statistical Package for the Social Sciences (SPSS) version 22 was used for data management and statistical analysis in both cases and controls. Chis square, Fisher's exact were used for calculation of the statistical significance. Clinical and general criteria in both cases and controls were presented as mean and standard deviation (\pm SD). *P*-value <0.05 was considered significant.



Figure 2: Sheteck Badinani type



Figure 2: Sheteck Sorani type

RESULT

A total of 149 cases and 100 controls were selected. The average age for cases was $51.4(\pm 13.28)$, which was significantly lower than that of controls $59.22(\pm 12.6)$, ($p<0.001$). Regarding occupation, there were no significant differences between cases and controls. The mean duration of back pain among cases was $5.54 (\pm 6.17)$ years, with 47.6%, 44.3% and 8.1% have mild, moderate, and severe pain, respectively. A total of 47% of the cases have the pain radiation to the leg, and 36.9% have the limitation of activity. Around 42.9% of the cases were involved with sciatica. None of the Controls had LBP or sciatica.

The habit of wearing Sheteck was significantly higher ($p<0.001$) among control than cases. About 57% of cases and 85% of control were in the habit of wearing Sheteck. Moreover, the duration of

wearing Sheteck was also significantly higher among controls than cases both for years of wearing and hours per day ($p < 0.001$). Finally, table 1, shows that the BMI was significantly higher among cases in comparison to controls ($p < 0.002$).

Table 2, shows that the odds ratio for wearing Sheteck was 0.23, which was

highly significant ($p < 0.001$). Table 3, reveals that the odd ratio of wearing Sheteck among cases with sciatica was 0.038, which was also significant ($p < 0.001$).

Table 1: Demographic and clinical characteristic of the study population

Criteria		Cases (149)	Control (100)	P-Value
Age		51.4 ± 13.28	59.22 ± 12.6	<0.001
Occupation	Government employee	35 (23.5%)	28 (28%)	0.663
	Military	30 (20.1%)	21 (21%)	
	Self-employee	84 (56.4%)	51 (51%)	
Habit of wearing Sheteck	No	64 (42.9%)	15 (15%)	<0.001
	Yes	85 (57%)	85 (85%)	
	If How many years	29.48 ± 16.43	36.88 ± 12.75	<0.001
	Yes How many hours/ day	7.19 ± 3.7	9.5 ± 2.45	<0.001
Duration of back pain (years)		5.54 ± 6.17	0	
Radiation of the pain to the leg	Yes	70 (47%)	0	
	No	79 (53%)	100	
Severity of the pain	Mild	71 (47.6%)	0	
	Moderate	66 (44.3%)	0	
	Severe	12 (8.1%)	0	
Limitation of the activity	Yes	55 (36.9%)	0	
	No	94 (63.1%)	100	
BMI		25.87 ± 3.65	24.54 ± 2.69	<0.002
Involvement of sciatica	Yes	64 (42.9%)	0	
	No	85(57%)	100	

Table 2. Odds Ratio, Chi-square and P-Value of wearing Sheteck among cases in comparison to controls

Criteria		Cases 149	Control 100	OR	χ^2	P-Value
Wearing Sheteck	Yes	85	85	0.23	21.6	<0.001
	No	64	15			

Table 3. Odd Ratio, Chi square and P-Value of wearing Sheteck among cases with and without sciatica

Criteria		Cases with Sciatica	Cases without sciatica	OR	χ^2	P-Value
Wearing Sheteck	Yes	12	73	0.04	67.2	<0.001
	No	52	12			

DISCUSSION

This is a case-control study when recall basis is considered to be the main limitation. Wearing Sheteck is a habit usually remembered by people as it is part of their traditional clothes. This study found that Sheteck was highly protective of LBP and sciatica. This might be due to the support that Sheteck gave. Almost all cases and controls were wearing Sheteck of Badinani type. This type usually has nodes and the length of material is almost double that of the Sorani one. The results are similar to some other studies which showed some protective effect of supporting belt, but the finding of this study showed a highly significant effect for the protection of LBP and sciatica 20, 21.

This study found about 43% of the LBP cases were due to sciatica. Whereas a previous study found 55% of the LBP cases were due to sciatica. 7About 37% of cases had limitation of movement. Mean age was significantly higher in controls than cases. This will further support the proposed protection of wearing Sheteck, as aging is considered one of the most dependent factors causing chronic LBP due to degeneration of the intervertebral disc. 22 Regarding BMI in cases was significantly higher than controls. Researchers reported that obesity is one of the risk factors for persistent LBP. 23 It has been reported that LBP is also influenced by other factors, which including posture and physical

workload 24. In this study, most of the participants in cases were self-employed, including; taxi drivers and workers (about 56.4%); the physical work and posture are highly influencing in LBP. 25

Wearing Sheteck was highly protective for LBP significantly with Odd Ratio about (OR 0.23). Moreover, the Sheteck was also significantly highly protective against sciatica among cases with OR about 0.04. This means that people wearing Sheteck are more than 4 times less liable to develop LBP; while the Sheteck was almost entirely protective from sciatica among cases suffering from LBP. The habit of wearing Sheteck has been present for generations among Kurds. This might have been associated with topography and work in the region. The Kurdish region of Iraq is a mountainous area with villages scattered on mountains and hills. Most of the work among the previous generation was Shepherd and agriculture. Despite the development of roads and the use of cars for transportation, the habit remains among olds as part of their traditional Kurdish clothes. This habit, however, is decreasing in the younger generation due to the globalization of clothes, and its use is limited to celebrations and parties.

In conclusion, the traditional Kurdish belt (Sheteck) is highly protective of LBP and Sciatica.

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پوخته

ئەری شیتک کەقنە شوپیا مێری کوردی دی رێگری ئیشانا پشتی و ئیشاندانا پشتی بولنگی گریت؟ لیکولینا بویهری و کونتولی

پێشهکی

ئیشانا پشتی (LBP) گازندهکا زور بهربه لاقه د پراکتیکا گشتی دا. گهلهک راپورت یێن ههقه دژ هه نه دهرحهقا قایشین پشتهقانیی بوریگر کرن و چاره سه ریا ئیشانا پشتی و ئیشاندانا پشتی بولنگی (sciatica). ئارمانجاقی لیکولینی ئه وه کو پوشینا شیتکا کەقنە شوپیا مێری کوردی لسه ر ئیشانا پشتی (LBP) و ئیشاندانا پشتی بولنگی (sciatica) بدهینه دیار کرن.

شیواز و نهخوش

ئه ق لیکولینه بویهر و کونتولی هاتیه دیزاییکرن. پرسه نامه یه کا تایبه ت هاتیه دروستکرن و پرکرن ژ بو پشکارا ل پارێزکه ها دهوکی هه ریم کوردستانا عیراقی. ئه وبویرین ئیشانا پشتی هه ی نهخوشن، ئه وین هاتیه ژێگرتن بو کونتولی 5 سالا بجیکتر یان مه زنتربون و هه می یێن ساخله م بون، کیماتی ژ 10 سالین بوری چ پشت ئیش نه بون. پاکیتا ژماره یی ژبو زانیارین جفاکی (SPSS) هاتیه بکارئانین ژبو ریکخستنا داتایا. چارگوشا چایی و ریا فیشه ر هاتنه بکارئان ژبو دیارکرن هه ژمارین گرنگ. کوو دیقژنیا ستاندارد ($\pm SD$) ئود ریزو (OR) هاتیه بکارئان ژبو ههنده ک پیفاندنن کلینیکی و گشتی.

ده ر نه نجام

ب گشتی 149 بویهر و 100 کونتول لسه ر قی لیکولینی به شاریون. ناقینیا ته مه نی بویهر 51.4 (± 13.28) و کونتولا 59.22 (± 12.6); ناقینیا سالین پشت ئیش دبویه رادا 5.54 (± 6.17); سالبون، دگهل 47% ژوان ئیش به لاق دبولنگا و ده وروبه ری 42.9% ده مارا مه زن یا بولنگا پشکار بوو. چ پشکارا ژ کونتولی ئیشانا پشتی و ئیشاندانا پشتی بولنگی نه بون. هیرسا داپوشینا شیتکی یا گرنگه ب پیفه رین ($P < 0.001$) ب نه بونا ئیشانا پشتی ب ریزه یا 0.23 (OR). ههروه سا دق لیکولینیدا هاتیه دیتن کوزه مین و ده مین گریدانا شیتکی روژانه یا گرنگتره و دریزتره ب پیفه رین ($P < 0.001$) ل کونتولادا دناقیه را بویه رادا هه ما هه ما ب تمامی یا پاراستی بوو و ئیشاندانا پشتی بولنگی (sciatica).

دیتن

پوشینا قایشاکه قنە شوپیا مێری کوردی (شیتک) لسه ر ئیشانا پشتی (LBP) و ئیشاندانا پشتی بولنگی (sciatica) زور ب پاریزه.

الخلاصة

هل حزام الذكور الكردي التقليدي هو وقائي من آلام أسفل الظهر وعرق النساء؟ دراسة الحالة والشاهد

خلفية البحث

آلام أسفل الظهر هي شكاوى شائعة في الممارسة العامة، هناك تقارير متضاربة حول فائدة الأحزمة الداعمة في العلاج والوقاية من آلام أسفل الظهر. الهدف من هذه الدراسة هو تحديد أي أثر وقائي محتمل للحزام الكردي التقليدي في آلام أسفل الظهر وعرق النساء.

المرضى وطرق البحث

تم تصميم دراسة مراقبة الحالة والشاهد. تم تطوير وملء استبيان مصمم خصيصاً للمشاركين في محافظة دهوك في إقليم كردستان العراق. الحالات كانوا المرضى الذين يعانون من آلام أسفل الظهر، في حين أن الضوابط كانت أعمارهم مطابقة (± 5 سنوات) وكانوا يبدوون صحيين وليس لديهم آلام أسفل الظهر على الأقل في السنوات الـ 10 الماضية. تم استخدام الحزمة الإحصائية للعلوم الاجتماعية لإدارة البيانات. وتم استخدام مربع تشي، معيار فيشر لحساب الأهمية الإحصائية. واستخدم المتوسط، الانحراف المعياري والنسبة الفردية مع بعض المعايير السريرية والعامة.

النتائج

شارك مجموع 149 حالة و 100 من الضوابط في هذه الدراسة. كان متوسط أعمار الحالات والضوابط $51.4 (\pm 13.28)$ و $59.22 (\pm 12.6)$ على التوالي. وكان متوسط مدة آلام أسفل الظهر بين الحالات 5.54 سنة (± 6.17) ; مع 47% ممن لديهم ألم يمتد إلى الساق وحوالي 42.9% في العصب الوركي. لم يكن أي من الضوابط لديهم آلام أسفل الظهر أو عرق النساء. عادة إرتداء الحزام إرتبطت بشكل مهم ($P < 0.001$) مع عدم وجود آلام أسفل الظهر وبمعدل فردي قدره 0.23). ووجدت الدراسة أيضاً أن فترة ومدة إرتداء الحزام التقليدي في عناصر الضوابط مقارنة بالحالات كانت أطول بكثير ($P < 0.001$).

الاستنتاجات

يعتبر حزام الذكور الكردي التقليدي واقياً للغاية لآلام أسفل الظهر وعرق النساء.

كلمات البحث: آلام أسفل الظهر وعرق النساء، حزام داعم (شيتك).

