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Original Article

Life quality changes within 26 month after the non-surgical treatment in patients with deep vein thrombosis

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Abstract: Objective: The objective of this study is to investigate the life quality of lower-extremity deep vein thrombosis (DVT) patients 26 m after progressive decompression elasticity socks therapy. Methods: SF-36 scale was used to record the life quality scores in 74 patients with acute and subacute deep venous thrombosis, all the patients received the non-surgical treatment. The eight dimensions of life quality variation were documented and analyzed. Results: The baseline data were comparable (P = 1.000 for age, P = 0.655 for sex). At the time of admission and at different time points after discharge, there were significant differences for eight dimensions in patients with deep vein thrombosis (Ps < 0.001). In addition that eight dimensions scores were significantly different between the score at 2 months, 4 months after discharge and the score at certain individual stages (Ps < 0.05), there were no significant difference for eight dimensions scores at different stages (Ps > 0.05). Conclusions: Showed slow improvement within six months of deep vein thrombosis in patients with non-surgical treatment, the life quality scores entered the plateau stage, the life quality of the RP and the PF dimension were slightly impaired, the VT dimension showed relatively obvious damage, the remaining dimensions can recover to healthy levels. The blood circulation activation drugs may help maintain the stability of life quality and delay the occurrence of PTS. The turning point of life quality did not show and required extended follow-up period.

Keywords: Deep vein thrombosis, life quality, brief health examination survey

Introduction

Post-thrombotic syndrome (PTS) is the most common long-term complication of deep vein thrombosis (DVT) [1-5]. Numerous studies have focused on DVT treatment methods, their effectiveness, and risk factors and treatments for PTS in recent decades [6, 7]. The prevention and treatment of PTS have become a research focus because PTS can cause labor-ability abatement and even loss of a patient. Vessel wall theory and valve theory are the two theories in PTS production. Fast-dissolving thrombi and damage reduction to the vessel wall and valve are the main objectives of treatments. Recent studies have shown that canal thrombolysis exhibits suitable dissolving effectiveness against DVT. Canal thrombolysis can reduce DVT damage in deep venous valves, reduce the re-sidual thrombus, and prevent the occurrence of PTS. Another common treatment is long-term elastic stocking decompression [8-11]. However, the abovementioned treatments are ineffective in reducing the occurrence of PTS. Recurrent chronic ulcers occur with the progression of the aforementioned clinical symptoms [12, 13]. Therefore, treatment focus is shifted to improving life quality and labor ability. Life quality may be affected to a certain extent during DVT treatment, thereby increasing the economic burden and occurrence of social mental disorders especially in patients with chronic ulcers. This condition could gradually worsen and significantly affect the life quality of patients, resulting in the loss of the ability to work in some cases [14]. Although several studies on the life quality of patients with DVT have been conducted in recent years, these studies were limited to patients who have had the illness for several years. Studies on life quality change during the duration of the disease are rare. Therefore, the clinical establishment of targeted treatment programs is useless. The systematical mastery of the principles of life quality change and characteristics of patients after DVT is very important in clinical consultation and therapy.

SF-36 is a widely recognized health survey scale; it contains eight dimensions that cover

Table 1. Age comparison of DVT patients before and at the different stages after thestandard treatment

The different stages of the treatment	N	$\bar{x} \pm s$
On admission	74	57.18 ± 17.918
2 months after discharging	72	57.13 ± 17.940
4 months after discharging	76	57.17 ± 18.495
6 months after discharging	74	56.81 ± 17.724
8 months after discharging	69	55.93 ± 18.116
10 months after discharging	59	56.04 ± 17.456
12 months after discharging	45	56.54 ± 18.178
14 months after discharging	36	57.92 ± 16.607
16 months after discharging	30	57.20 ± 16.890
20 months after discharging	25	58.93 ± 17.642
22 months after discharging	29	56.56 ± 17.450
24 months after discharging	22	57.11 ± 16.455
26 months after discharging	29	56.65 ± 15.903
Summary	667	56.85 ± 17.482

Note: F = 0.080, *P* = 1.000.

the subjective and objective experiences of patients [15, 16]. SF-36 was applied periodically to 74 patients with DVT in this study. After 26 m of follow-up, the changes and damage in each dimension of life quality were obtained. The main aspects and variations in DVT-affected life quality were investigated with the objective of providing a foundation for clinical treatment and health consultation.

Materials and methods

General information

A total of 74 patients, 42 males and 32 females, with acute or sub-acute DVT in the lower extremity were admitted in our hospital from March 2009 to March 2012. The 74 patients underwent standard thrombolytic therapy. SF-36 scales were utilized to measure data. The ages of patients ranged from 17 to 93 years with a mean age of 56.85 ± 17.482 years. Among the 74 patients, 71 were Han people and 3 belonged to a minority group. The number of follow-ups was between 1 to 14 times. Data analysis was conducted 667 man-times. The clinical classifications in this study were of mixed types. All the patients experienced limb soreness during remission compared with the pre-treatment situation, especially in the standing position than in the supine position. No significant changes were noted in the follow-up period. Limb swelling in six patients was not relieved, whereas limb swelling in the other patients was reduced compared with the pre-treatment condition. Pain was also relieved 12 m later. Only one patient experienced significant limb pain, which affected the movement of the said patient. The patients exhibited no skin pigmentation and ulcers.

Patients who suffered from acute or sub-acute DVT in the lower extremity within 1 m, have undergone standard thrombolytic therapy in our department, and are willing to join the experiment were included in this study. The patients were asked to provide formal ethical consent and complete the SF-36 scale follow-up plan. Patients with chronic DVT and those unwilling to sign the ethics consent form before the experiment were excluded. This study was conducted in accordance with the declaration of Helsinki. This study was conducted with ap-proval from the Ethics Committee of Xinjiang Medical University. Written informed consent was obtained from all participants.

SF-36

SF-36 is a condensed health survey scale developed by the Institute of Health, Boston, USA. It is widely utilized in life quality measurement, clinical trial effects assessment, health policy evaluation, and other applications. SF-36 comprehensively summarizes the life quality of respondents from eight aspects, namely, physiological function, RP, BP, GH, VT, SF, RE, and MH. SF-36 provides scores based on scoring standards; the score of each dimension is then calculated through relevant formulas. A high score in each dimension indicates good life quality. Cronbach's α coefficient value is usually between 0 and 1. When the coefficient value of Cronbach's α is not more than 0.6, the scale is considered unreliable. A value between 0.7 and 0.8 indicates that the scale is considerably reliable, whereas a value between 0.8 and 0.9 indicates that the reliability of the scale is very good [16].

This study utilized the SF-36 scale to assess the life quality of patients. Hospitalization period was set as the research starting point. Data were measured with the SF-36 scale every 2 m thereafter. Data were divided into 14 groups

Table 2. Tribe comparison of DVT patients before and at the different stages after the standard treatment

Follow-up time	Han		Minority		Summary
	n	%	n	%	n
On admission	71	95.95	3	4.05	74
2 months after discharging	69	95.83	3	4.17	72
4 months after discharging	73	96.05	3	3.95	76
6 months after discharging	71	95.95	3	4.05	74
8 months after discharging	66	95.65	3	4.35	69
10 months after discharging	57	96.61	2	3.39	59
12 months after discharging	43	95.56	2	4.44	45
14 months after discharging	35	97.22	1	2.78	36
16 months after discharging	29	96.67	1	3.33	30
18 months after discharging	25	92.59	2	7.41	27
20 months after discharging	23	92.00	2	8.00	25
22 months after discharging	27	93.10	2	6.90	29
24 months after discharging	20	90.91	2	9.09	22
26 months after discharging	27	93.10	2	6.90	29
Summary	636	95.35	31	4.65	667

Note: $\chi^2 = 3.609$, $P = 0.995$.

based on follow-up time: upon admission, 2 m after discharge, 4 m after discharge, and 26 m after discharge.

Quality control

The objective and significance of this study were clarified to the patients before the survey to obtain their trust and cooperation. The patients eventually provided their informed consent. Hesitant patients were excluded to ensure long-term compliance in the follow-up process and to reduce the dropout rate. The patients were hospitalized in our department and monitored by a competent physician. Only a few questions were asked during the follow-up sessions to avoid the notion that information is induced as well as to avoid bias.

Different groups of people were in charge of data collection, data collation, and database creation to ensure data integrity and accuracy. Statistical computations were performed by teachers from the Department of Statistics who are not involved in this study. The teachers were not allowed to have contact with people who collected data to avoid artificial modification of statistical results.

Statistical analysis

EpiData3.1 was utilized to establish a database. SPSS12.0 statistical software was employed in the data analysis. The "mean ± standard deviation, me-dian, maximum, minimum" was selected based on data distribution to describe the statistics. Different categories were compared through analysis of variance. χ^2 test was performed for the counting data, and single ANOVA test was performed to compare life quality in the different groups. The significance level was set at $\alpha = 0.05$.

Results

Clinical data

Statistical analysis shows that the age ($P = 1.000$), gender ($P = 0.655$), and tribes ($P = 0.995$) of the patients are equally distributed at different stages of the treatment. **Tables 1**-**3** provide detailed information.

Follow-up

Data were obtained through telephone follow-up from 2 m to 26 m. Follow-ups were conducted 1 to 14 times. Average follow-up duration was 18.65 ± 7.473 m. All patients were subjected to follow-up sessions.

Statistical differences were noted among DVT patients in each dimension upon admission and at different stages after discharge ($P < 0.001$). The score of each dimension at different stages after the treatment is significantly higher than that before the treatment (statistically significant difference). **Tables 4**, **5** provide detailed information. The score of each dimension at different stages after the treatment gradually increases with the increase in the number of follow-ups, suggesting that health gradually improved. The scores of most of the life quality dimensions begin to decline 18 m after discharge, suggesting that health was restored and the illness began to subside. **Figure 1** shows the life quality changes in various dimensions.

Discussion

PTS is a long-term complication of DVT, which is a common peripheral vascular disease. A patient at severe conditions could suffer from venous ulceration [17], which can seriously affect the life quality of the patient [18, 19]. Although treatment with catheter thrombolysis

Table 3. Gender comparison of DVT patients before and at the different stages after the standard treatment

Follow-up time	Male		Female		Summary
	n%		n%		n
On admission	42	56.76	32	43.24	74
2 months after discharging	41	56.94	31	43.06	72
4 months after discharging	42	55.26	34	44.74	76
6 months after discharging	42	56.76	32	43.24	74
8 months after discharging	41	59.42	28	40.58	69
10 months after discharging	34	57.63	25	42.37	59
12 months after discharging	24	53.33	21	46.67	45
14 months after discharging	22	61.11	14	38.89	36
16 months after discharging	19	63.33	11	36.67	30
18 months after discharging	18	66.67	9	33.33	27
20 months after discharging	19	76.00	6	24.00	25
22 months after discharging	22	75.86	7	24.14	29
24 months after discharging	16	72.73	6	27.27	22
26 months after discharging	17	58.62	12	41.38	29
Summary	399	59.82	268	40.18	667

Note: $\chi^2 = 10.468$, $P = 0.655$.

and elastic stocking decompression can reduce the occurrence of PTS, doctors cannot provide patients consultation and therapy to improve life quality because of the lack of research on life quality and characteristics of the disease in different post-DVT stages [20, 21]. The data obtained with SF-36 scale from the patients in our hospital can provide information for the further investigation of life quality characteristic changes in DVT patients and can serve as a basis for clinical treatment and guidance.

SF-36 is a universal health-related life quality scale. This scale can objectively quantify various subjective indicators and factors in the measurement of living conditions. The scale has good measuring characteristics, including reliability, validity, and responsiveness. SF-36 is a convenient measuring tool for epidemiological investigation and clinical use [16]. The Cronbach's α coefficient obtained in this research has a value of 0.902, indicating that reliability is very good and that the results are reliable.

PF was employed in this study to determine whether health status affects regular physiological activities. RP was utilized to measure the functional restrictions caused by physiological health problems. BP was utilized to measure the degree of pain and its impact on daily activities. GH was employed to measure an individual's assessment of his or her own health status. VT was employed to me-asure an individual's subjective feelings toward his or her own fatigue. SF was utilized to measure the impact of physical and psychological problems on the quantity and quality of social activities as well as to evaluate the health effects of such problems on social activities. RE was employed to measure the functional limitations caused by emotional problems. MH was utilized to measure the four MH projects, including motivation, depression, behavioral or emotional control, and mental subjective feelings. A high score in each dimension indicates that health slightly affects the dimension and that health status is good [16].

Statistical analysis shows that the age ($P = 1.000$), gender ($P = 0.655$), and tribe ($P = 0.995$) of the patients are equally distributed at different stages of the treatment, indicating that the basic composition structure of the patients in this study exhibits no significant change during the follow-up. Data comparability is improved.

The scores of life quality in various dimensions indicate that life quality in each stage after plateau is significantly higher than that before treatment. This result indicates that each dimension of life quality improves rapidly 2 m to 4 m after treatment. Each dimension then enters the platform stage; health is restored to the best degree and is essentially kept stable. This result is consistent with the research results obtained by Kahn et al. [15]. Several researchers believe that life quality begins to decrease gradually in post-DVT (4 months); however, not enough evidence supports this be-lief [22]. The improvement in vascular patency after treatment causes insufficient damage on the vessel wall and deep venous valve for the blood reflux degree to exceed blood backflow. The improvement in somatic symptoms causes the comprehensive recovery of life quality, which does not return to the healthy level. This occurrence yields different results because of the use of different research methods by researchers.

MH improves in the first 4 m and begins to enter the platform period after the 4th month.

Table 4. Different dimension comparison of life quality of DVT patients before and at the different stages after the standard treatment

Follow-up time	N	PF	RP	GH	RE
On admission	74	11.15 ± 15.137	5.07 ± 14.908	33.38 ± 14.241	24.32 ± 32.780
2 months after discharging	72	45.76 ± 24.946	26.04 ± 35.957	46.82 ± 13.614	66.67 ± 38.354
4 months after discharging	76	66.45 ± 22.208	41.45 ± 37.981	54.51 ± 13.263	83.77 ± 29.561
6 months after discharging	74	73.65 ± 20.645	50.68 ± 38.368	57.53 ± 13.989	87.39 ± 25.703
8 months after discharging	69	76.88 ± 19.443	53.99 ± 37.774	59.68 ± 14.286	88.41 ± 25.454
10 months after discharging	59	76.53 ± 20.005	60.17 ± 36.293	61.07 ± 13.849	92.09 ± 20.843
12 months after discharging	45	80.22 ± 16.853	61.67 ± 39.022	63.87 ± 12.761	89.63 ± 19.876
14 months after discharging	36	79.31 ± 15.267	64.58 ± 36.043	64.67 ± 11.566	91.67 ± 16.667
16 months after discharging	30	79.50 ± 13.284	60.00 ± 34.491	63.03 ± 13.685	86.67 ± 29.814
18 months after discharging	27	80.37 ± 15.186	64.81 ± 37.506	63.41 ± 15.739	87.65 ± 29.451
20 months after discharging	25	80.20 ± 15.711	59.00 ± 38.784	61.80 ± 16.676	85.33 ± 32.030
22 months after discharging	29	81.38 ± 14.994	62.93 ± 36.364	60.83 ± 13.975	81.61 ± 32.837
24 months after discharging	22	81.59 ± 15.460	67.05 ± 34.835	60.77 ± 10.989	83.33 ± 32.121
26 months after discharging	29	85.86 ± 11.655	75.00 ± 32.733	65.31 ± 8.431	89.66 ± 23.744
F/χ^2		71.049	15.827	24.822	25.841
P		0.000	0.000	0.000	0.000

Compared with the beginning of the platform period, the 14th, 24th, and 26th month exhibit statistical differences. This finding indicates that patient mood and subjective feelings continuously improve in 4 m and remain stable. Patient mood may be further improved in the short term during this period. After two years, emotions may obtain a second steady increase. This dimension variation improves rapidly at first and appears as a battle-like improvement in the late stage.

RP continues to improve in the first 2 m but does not immediately enter the platform period. It enters the platform period in the 6th month; however, improvement is slow. Therefore, no statistical significance exists between the 2nd and 4th month and the 6th month. However, a statistical significance exists be-tween the 4th and 6th month. This result indicates that after 6 m, the quantitative change finally enters the platform period. Quantitative changes gradually occur from the 6th month to the 26th month; thus, a statistically significant improvement in life quality is noted in the 26th month compared with the 4th month. This result suggests that somatic dysfunction has a significant impact on daily life and work, leading to slow recovery. Daily life and work are restored to a relatively stable phase in the 6th month. The impact of somatic function on daily life declines in the 26th month. Thus, the improvement of this dimension is linear with a low slope.

PF continues to improve in the first 4 m and begins to enter the platform in the 4th month. The 12th to 14th, 22nd, and 26th months are statistically different from the beginning of the platform period. This result indicates that limitation in the degree of physical activity caused by the illness improves continuously after the treatment. PF enters a relatively stable phase after 4 m with repeated cycles of improvement and decline. This dimension variation is represented by initial rapid improvement and gradual battle-like improvement in the late stage. Such result could have been caused by the fact that factors promoting venous reflux and backflow are gradually increased without synchronization during this stage; that is, the degree of establishment of limb collateral circulation and vessel wall and valve damage is sometimes strong and sometimes weak.

GH exhibits rapid improvement at first and then wavy improvement (the peak in the latter is higher than that in the former) in 26 m, forming two heights at the 14th and 26th months. GH continues to improve in the first 4 m and begins to enter the platform period in the 4th month. Compared with the beginning of the platform period, the 12th to 14th and 26th months show statistical differences. This result indicates that the patient's estimation of his or her health improves rapidly in the first 4 m and then exhibits its subsequent fluctuation because of the phys-

Table 5. Different dimension comparison of life quality of DVT patients before and at the different stages after the standard treatment

Follow-up time	N	SF	BP	VT	MH
On admission	74	26.01 ± 23.294	49.19 ± 21.223	47.64 ± 15.816	52.81 ± 10.041
2 months after discharging	72	44.97 ± 23.424	73.57 ± 14.825	60.28 ± 14.773	64.89 ± 10.620
4 months after discharging	76	74.01 ± 18.904	82.89 ± 10.829	65.53 ± 12.585	71.37 ± 9.076
6 months after discharging	74	77.70 ± 17.710	84.35 ± 10.243	66.42 ± 12.008	72.86 ± 8.537
8 months after discharging	69	80.43 ± 16.809	84.25 ± 10.793	65.43 ± 11.843	75.07 ± 8.063
10 months after discharging	59	81.78 ± 15.627	85.39 ± 8.463	65.00 ± 11.064	74.98 ± 6.750
12 months after discharging	45	85.56 ± 14.586	86.62 ± 7.284	66.78 ± 11.035	76.44 ± 5.061
14 months after discharging	36	84.03 ± 14.209	85.89 ± 6.844	67.08 ± 12.500	78.11 ± 5.932
16 months after discharging	30	85.00 ± 11.084	85.87 ± 7.314	67.33 ± 13.755	76.93 ± 8.956
18 months after discharging	27	85.65 ± 14.993	88.52 ± 5.338	64.81 ± 12.670	76.44 ± 9.103
20 months after discharging	25	82.00 ± 15.762	87.28 ± 6.400	61.80 ± 9.883	76.16 ± 8.980
22 months after discharging	29	82.33 ± 14.759	86.28 ± 7.478	61.90 ± 13.785	77.10 ± 8.938
24 months after discharging	22	81.25 ± 17.572	85.55 ± 7.658	64.32 ± 11.577	79.27 ± 6.720
26 months after discharging	29	84.05 ± 13.732	86.69 ± 7.016	64.31 ± 7.036	80.00 ± 6.047
F/χ^2		61.067	50.481	10.527	42.614
P		0.000	0.000	0.000	0.000

ical and psychological pressure imposed by the long-term illness.

RE exhibits jagged peaks and yields valley-like scores of life quality in the 26 m period; the highest peak occurs at the 10th month. RE enters the platform period in the 4th month; however, from the beginning of the 16th month, the life quality score declines to that in the 2nd to 4th months, showing no statistical difference. RE improves again in the 26th month. This result indicates that the effect of emotion on daily life and work is rapidly reduced as patient condition improves. It returns to a relatively stable stage after 4 m and decreases to the lowest extent after 10 m. Subsequently, lack of condition improvement causes persistent distress to patients; this distress worsens the emotional problem of patients, leading to an increased impact on daily life and work. The life quality score decreases to the level of the plateau stage in the 16th month. Patient emotion improves again in the 26th month based on the improvement in the life quality dimensions. The score is elevated to the level before the platform stage with the promise of future health.

SF continues to improve in the first 4 m and begins to enter the platform period in the 4th month. The 14th month shows a statistical difference compared with the beginning of the platform period. This result indicates that the social skill of patients becomes relatively stable after 4 m of continuous improvement and reaches the peak in the 14th month. The reason for such finding could be that the patient is able to perform stable social activities under pressure; a large fluctuation does not appear.

BP exhibits initial rapid improvement, exhibiting jagged and valley-like peaks in the 26 m period; the highest score is obtained in the 18th month. This result indicates that blood circulation is improved with the dissolution of thrombi; thus, the degree of pain experienced by the patient can be relieved rapidly in the first 4 m. Afterward, body pain exhibits the same variation owing to the same reason that causes change in PF.

VT enters a large microwave wave-type platform period in the 2nd month. This result indicates that the fatigue experienced by patients becomes relatively stable after 2 m of treatment. The feeling of fatigue is sometimes strong and sometimes weak owing to the same reason that causes changes in GH and RE.

Tables 4, **5** and **Figure 1** show that PF (11.15 ± 15.137) and RP (5.07 ± 14.908) are the most affected dimensions in DVT patients followed by RE (24.32 ± 32.780) and SF (26.01 ± 23.294). MH (52.81 ± 10.041) is the least affected dimension. BP (49.19 ± 21.223), GH

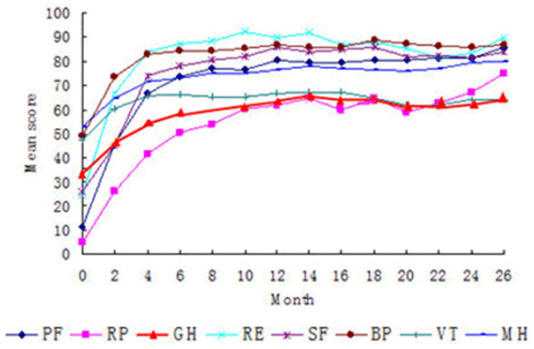

Figure 1. Changes of all dimensions in life quality.

(33.38 ± 14.241), and VT (47.64 ± 15.816) are affected to a certain extent. VT (67.33 ± 13.755) is the slowest in terms of recovery speed, whereas PF (84.85 ± 15.334) and RE (92.09 ± 20.843) are the fastest. BP (88.52 ± 5.338) and RE (92.09 ± 20.843) are the dimensions that could exhibit the best recovery in the near future after treatment, whereas VT (67.33 ± 13.755) and GH (64.67 ± 11.566) are the worst.

DVT seriously affects PF (11.15 ± 15.137) and RP (5.07 ± 14.908), which are related to labor and daily living skills. However, PF (85.86 ± 11.655) and RP (75.00 ± 32.733) can be significantly improved shortly after the treatment. The Sichuan urban population norm [PF (90.80 ± 15.07) and RP (79.51 ± 34.70)] [22] indicates that the platform period of PF and RP recovers after treatment and becomes slightly lower than that of the normal population. Physical activity is slightly affected, leading to slight restriction in daily life and work.

DVT significantly affects RE (24.32 ± 32.780). However, RE (92.09 ± 20.843) recovers after the treatment compared with the other dimensions. The Sichuan urban population norm [RE (76.45 ± 38.47)] [22] indicates that RE recovers to healthy levels in this research and does not reduce the work hours or the careful extent of work caused by DVT.

Data also show that DVT affects SF (26.01 ± 23.294). The degree of SF recovery (85.56 ± 14.58) improves after the treatment. The Sichuan urban population norm [SF (85.29 ± 18.06)] [22] indicates that the patients recover to healthy levels after the treatment, which does not significantly affect the collective social activities of the patient and his or her family.

DVT has a certain impact on GH (33.38 ± 14.241). GH (64.67 ± 11.566) exhibits poor recovery after the treatment; its recovery is the lowest among all the dimensions. This result is consistent with that obtained by the average two-year retrospective study conducted by the University of Vermont (GH = 62.4). Unlike in the current study, the most damaged dimension in the Vermont study is VT (52.0); however, the degree of VT recovery (67.33 ± 13.755) is better than that of GH [18]. The Sichuan urban population norm [GH (67.30 ± 21.97)] [22] indicates that the GH level of Chinese citizens is generally low. DVT could cause an expected slight decline in health; however, this decline would not be a burden.

Data show that MH (52.81 ± 10.041) is the least affected dimension and could recover after the treatment (80.00 ± 6.047). The MH norm (73.52 ± 15.68) [22] indicates that DVT patients could recover to healthy levels after the treatment without experiencing serious MH-related stress and depression.

Data also indicate that VT (47.64 ± 15.816) is affected to a certain extent and recovers to (67.33 ± 13.755) after the treatment. The VT norm (71.44 ± 15.81) [22] indicates that DVT could cause patients to suffer from decreased energy and fatigue, revealing that DVT of the patients in this research is significantly lower than that of healthy people.

BP (49.19 ± 21.223) is affected to a certain extent by DVT. BP can recover to (88.52 ± 5.338) after the treatment. The Sichuan urban population norm [BP (82.41 ± 21.25)] [22] indicates that DVT patients experience initial limb pain, which significantly improves after the treatment. DVT patients exhibit no difference compared with healthy people. Therefore, DVT would not cause additional limb pain to patients.

In conclusion, most of the various dimensions of life quality enter the platform period in the 2nd to 4th month. However, the forms of platform period vary (battle-like, wavy, or jagged). The reason for such variation could be that the speed of internal collateral circulation establishment and degree of damage in the vessel wall and valve are sometimes strong and sometimes weak in the 26 m after the illness. If the factors promoting blood backflow reach the limit, the inflection point of life quality may

appear with aggravated blood reflux. Therefore, the administration of blood stasis-activating drugs in the chronic period may delay the occurrence of PTS and maintain the life quality stability of the patient. Although most of the life quality dimensions in this stage are accessible or are restored to healthy levels, VT remains damaged. Further study is required to determine whether this occurrence has a relationship with long-term PTS in patients [17]. The inflection point of life quality appears as time progresses. The dimension that is damaged first, the extent of the damage, and the conditions that reduce the damage should be further investigated in future studies.

Disclosure of conflict of interest

None.

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