

Qualitative analysis of physical therapy outcome prior to lumbar micro-discectomy in patients with sciatica

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Objective: To evaluate the patients' perceptions and experiences of a physical therapy treatment at Shifa International Hospital, Islamabad, Pakistan for managing the symptoms of sciatica.

Methodology: This qualitative study was part of a pilot randomized controlled trial of physical therapy in treating the symptoms of sciatica prior to Lumbar Micro-discectomy surgery. The patients from the intervention arm of the trial were invited to participate in In-depth Open Ended Semi-Structured Interviews. A total of 19 in-depth, semi-structured interviews were conducted and recorded in order to transcribe them fully and analyze thematically.

Results: Seven out of 19 patients who had interview did not go for surgery. They appreciated

the sole nature of the approach as well as the manual therapy and the effect of different lumbopelvic stability exercises and cardiovascular exercises in reducing pain or discomfort and improving their trunk movements, walking patterns and dynamic postures. However, a few patients failed to find the physical therapy effective. Overall, 12 patients in the study went with surgery although they had found physical therapy valuable as pre-op rehabilitation.

Conclusion: Most of the patients with sciatica had appreciated the effect of physical therapy before surgery. (Rawal Med J 202;46:589-592).

Keywords: Sciatica, micro-discectomy, perceptions.

INTRODUCTION

'Sciatica' is a common problem that might be highly painful and often disabling. It can be source of disability, work loss and withdrawal from activities of daily life.¹ It is mostly accompanied by a neurological deficit i.e. decreased muscle power, abnormal sensation and reflexes.² The choice of an effective treatment whether conservative or surgical is yet unclear. After one year, there is a little difference noticed in outcomes in both physical therapy and surgical groups.³ What will be the most effective and reliable type and duration of treatment and the required level of skill and experience of the therapist who is actually providing the treatment is still not clear.^{3,4}

It is suggested by the recent guidelines on the management of Low Back Pain and sciatica that a spontaneous resorption of the disc fragment occurs, physical therapy manages the symptoms, whilst the resorption of disc fragment proceeds.^{4,5} Further research work is recommended to isolate those patients who have actually responded well to the conservative approaches of treatment. We report

outcomes of the Pilot Randomized Controlled trial of a physical therapy intervention for patients suffering from the Sciatica at Shifa International Hospital.

METHODOLOGY

A constructivist methodology had been used for this qualitative study at Shifa International Hospital. The constructivism assumes that the individuals themselves construct the meaning of experiences and events that happened to them and in this way they actually build the facts in which they tend to participate.⁶ Moreover, the researchers also construct the meaning in the same way about the interpretation of the studied phenomenon.⁶

The patients from the intervention arm of the pilot RCT awaiting lumbar micro-discectomy were selected. They were informed about their future participation in an in-depth Open Ended Semi-Structured Interview on the completion of their physical therapy intervention. An interview was scheduled. The interviews were conducted by the

researchers either at the patient's home or at the clinic. The study had received an ethical approval from the Research Ethical Committee of hospital. A consent form was signed by all the patients prior to their inclusion in the study. A detail of Physical therapy intervention was described during interviews by one of the two trained physical therapists. Total of 12 physical therapy sessions were given to the patients in the intervention arm of the trial. We used Oswestry Disability Index and Visual Analogue Scale.

Statistical Analysis: The transcripts of all the interviews were sent to the NVIVO® data management system where they were analyzed thematically. The emerging themes and codes were analyzed as a team in order to achieve an inter-subjective validation through comparisons. A code was assigned to each theme and examined for its analytical aspects, and then the different patterns were explored for constructing an emergent theme.

RESULTS

Description of the sample

Nineteen patients out of 25 in the intervention arm participated in the interviews at the end of therapy sessions (Table). The remaining six had failed to respond by telephone. Twelve patients out of these 19 had gone through the surgery after their course of physical therapy, whilst 7 of them had decided not to proceed with surgery. The major codes included for the patient interviews were previous history of the disorder, overall impact of sciatica on the quality of life, expectations from physical therapy, major concerns and apprehensions before getting physical therapy, level of contentment from received physical therapy, beneficial and less beneficial aspects of the physical therapy, level of anxiety before surgery, importance of physical therapy before and after surgery, the current satisfaction and future optimism about sciatica. The three main emerging themes obtained from data analysis are as follows.

Table. Demographic characteristics of the patients.

Sr. No	ID No	Age	Gender	Ethnicity	ODI ^a Baseline	ODI ^a Follow-up	VAS ^b Baseline Back/Leg	VAS ^b Follow-up Back/Leg	Number of Physiotherapy sessions	Surgery
1	1001	26	Female	Pakistani	56	37	80/29	69/77	12	Yes
2	1002	39	Male	Pakistani	39	48	55/90	95/75	8	Yes
3	1003	45	Female	Pakistani	66	40	0/55	0/54	10	No
4	1010	32	Male	Pakistani	41	19	25/38	19/45	12	Yes
5	1014	35	Female	Pakistani	31	37	39/78	49/43	12	Yes
6	1019	31	Female	Pakistani	71	59	33/61	34/60	4	Yes
7	1023	27	Male	Pakistani	49	40	55/60	39/72	12	No
8	1025	38	Male	Pakistani	40	20	50/61	2/3	12	No
9	1027	36	Female	Pakistani	57	54	90/92	87/89	12	No
10	1031	32	Female	Pakistani	30	25	59/29	60/19	12	Yes
11	1034	27	Female	Pakistani	60	54	82/88	79/81	6	Yes
12	1035	29	Male	Pakistani	25	19	40/38	9/0	8	Yes
13	1038	36	Female	Pakistani	43	35	75/70	67/60	12	Yes
14	1039	34	Male	Pakistani	25	18	31/39	39/30	10	No
15	1041	36	Female	Pakistani	44	43	72/58	49/33	10	Yes
16	1043	41	Male	Pakistani	60	35	75/40	9/9	12	No
17	1046	46	Female	Pakistani	29	46	79/89	75/74	12	Yes
18	1047	35	Male	Pakistani	26	21	41/52	9/31	12	No
19	1050	40	Female	Pakistani	45	49	51/49	49/46	4	Yes

^aOswestry Disability Index (0–100). ^bPain Visual Analogue Scale (0–100).

Overall impact of sciatica on patients' quality of life prior to the pilot trial:

Most reported that the condition made moving difficult and painful, causing them to struggle with activities of daily living. It started to affect my mobility, meaning that I couldn't bend as much. I certainly couldn't touch my toes anymore which therefore meant I couldn't put my knickers on in a morning properly or put my socks on. Some also reported having to take sick leave from work: at its worst, it resulted in me taking three weeks off work, sick.

Most of the patients had reported that sciatica prevented them from participating in leisure activities like running or playing football. Some reported sleeping disturbance leading to anxiety, depression and a strain on family relationships. Others reported that there were times when the sciatica left them completely immobile, and reliant on analgesics.

Expectations and perceptions of patients from the physical therapy treatment:

The patients had reported a range of expectations including obtaining advice on managing the pain, improving mobility and flexibility and for a small number in the sample, the hope that it might prevent the need for surgery: My thoughts were that it would assist my movement; I thought it would ease the pain a fair bit and also possibly relieve it enough so that I didn't need to have surgery.

Some patients had acknowledged the patient education aspect of the physical therapy in boosting up their self-confidence. "A lot of it was the confidence side of things and the counseling that I got from the physiotherapist that you can bend like this and pick up something quite heavy and also the development of the exercises to get over the psychological side of things.

Perceptions of patients regarding the value of physical therapy as an adjunct to surgery:

Twelve patients proceeded with the surgery. Most of them believed that the physical therapy had had some positive effects before surgery. "The physiotherapy has taught me how to get out of bed properly, after the surgery, because they told me how to do it before I had my surgery." Other patients spoke of the confidence that the physical therapy

had given to them in terms of managing their symptoms post-surgery.

DISCUSSION

Our patients reported sleep disturbance in terms of duration, quality and satisfaction that is a commonly occurring complaint in patients with low back pain.^{7,8} The feelings of anxiety and depression had also been reported. These findings are similar to previous literature which suggests that sciatica has a detrimental impact on the quality of life.^{9,10}

Most patients had found the physical therapy valuable. They highlighted exercises that reduce pain and discomfort, techniques that improve spinal movements and patterns of walking or posture, manual therapy, cardiovascular and strengthening exercises. However, most of the patients were not satisfied enough with the physical therapy intervention to not proceed "with lumbar micro-discectomy; although they thought it would be beneficial to manage their condition before surgery. They found physical therapy ineffective as it had aggravated or had not reduced their symptoms.

At the end of the session, only 7 out of 19 patients interviewed, had elected for not to proceed with the surgery after their physical therapy. Those who proceeded with surgery acknowledged that the physical therapy had helped them to recover better after surgery with an improved mobility, strength, flexibility and practical techniques in managing their symptoms.

CONCLUSION

Most of the patients with sciatica had appreciated the effect of physical therapy before surgery.

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