May 3, 2021

Dear editor，

The manuscript has been revised according to the requirements of the reviewer.

The reviewer's questions:

1. Please reorganize the text by referring to the Guidelines for manuscript preparation, submission, and manuscript format: Observational study (https://www.wjgnet.com/bpg/GerInfo/200) .

2. It is necessary to shorten the sentence repeatedly described in result.

3. For each table it is necessary to indicate the statistical method used.

Answers:

1. We have reorganized the manuscript by referring to the Guidelines for manuscript preparation, submission, and manuscript format: Observational study (https://www.wjgnet.com/bpg/GerInfo/200).

2. We have shorten the sentence repeatedly described in result. The revised result are as follows:

RESULTS

Overall characteristics of patients

In the conservative treatment group, there were 80 patients with complete follow-up data, including 20 males and 60 females, aged （58.75±14.66） years old. And in the knee arthroscopic debridement group, there were 98 patients with complete follow-up data, including 24 males and 74 females, aged（59.27±14.48）years old. There was no statistically significant difference in the

general data (gender, age, BMI, side of knee osteoarthritis, Kellgren-Lawrence grade distribution of different grades, HSS score and VAS score) between the two groups before treatment (Table 1).

Therapeutic effects of the two groups

The HSS scores of the conservative treatment group at the 1st month, 3rd month, 6th month, 12th month and 24th month after treatment were significantly higher than that before treatment （$P<0.05$; Table 2）. There was no statistical difference in HSS score of the conservative treatment group between the 1st month, 3rd month, 6th month, 12th month and 24th month（$P>0.05$; Table 2）. The HSS score of the knee arthroscopic debridement group at the first month after surgery was significantly higher than that before surgery （$P<0.05$; Table 2）. HSS scores of the knee arthroscopic debridement group at the 3rd month, 6th month, 12th month and 24th month were significantly higher than those before surgery and the 1st month after surgery（$P<0.05$; Table 2）. There were no statistically significant differences in HSS scores at the 3rd month, 6th month, 12th month and 24th month after surgery （$P>0.05$; Table 2）. HSS scores at the 3rd month, 6th month, 12th month and 24th month were significantly higher in the arthroscopic debridement group than in the conservative treatment group （$P<0.05$; Table 2）. There was no statistical difference in HSS scores between the two groups before treatment and at the 1st month of follow-up（$P>0.05$; Table 2）. VAS scores

during walking and rest were significantly decreased in both the arthroscopic debridement group and the conservative treatment group after treatment(Table 3, Table 4). The walking VAS score in the arthroscopic group was significantly lower than that in the conservative group at 1st month after treatment（$P<0.05$; Table 3）. There were no statistically significant difference in walking VAS scores between the two groups before treatment and during follow-up at the 3rd month, 6th month, 12th month and 24th month（$P>0.05$; Table 3）. The VAS scores at rest in the arthroscopy group were significantly lower than that in the conservative treatment group at the follow-up of 3rd month, 6th month, 12th month and 24th month（$P<0.05$; Table 4）. There was no significant difference between the VAS scores at rest between the two groups before treatment and at 1st month of follow-up（$P>0.05$; Table 4）.

Post-treatment complications

In the conservative treatment group, 5 patients showed symptoms of upper digestive tract adverse reactions such as stomach pain and acid return due to long-term oral administration of NSAIDs. The incidence of adverse reactions was 6.25%. After drug withdrawal and oral acid suppressive agent treatment, adverse reactions were relieved, and no significant cardiovascular adverse reactions occurred. In the knee arthroscopic debridement group, 2 patients developed wound infection after surgery, the incidence of adverse reactions was 2.04%, which was cured by incision

dressing change and intraarticular injection of vancomycin combined with intravenous cephalosporin antibiotics. The total number of cases was n=178 ＞ 40, and the minimum theoretical frequency was 1＜3.15＜5, so the incidence of adverse reactions between the two groups was compared by continuity correction Chi-square test (χ_c^2 =1.102, P =0.294). There was no significant difference in the incidence of adverse reactions between the two groups.

3. We have indicated the statistical method used in each table. The revised result are as follows:

Table 1 The baseline data in both groups

Variable	Group A	Group B	t-value	χ^2-value	P-value
Number of patients	98	80			
Age in yr, mean ± SD	59.27±14.48	58.75±14.66	-0.235	-	0.815
Female/male	74/24	60/20	-	0.006	0.937
BMI, mean ± SD	24.60±2.74	24.92±2.68	0.776	-	0.439
Side of KOA（left/right）	44/54	36/44	-	0.000	0.989
Kellgren-Lawrence grade					

1	26	23	-	0.109	0.742
2	22	19	-	0.042	0.838
3	50	38	-	0.218	0.640
HSS score before treatment, mean ± SD	78.65±11.20	79.10±11.41	0.263	-	0.793

Note: Statistical significance between the two groups was tested by *t* test or χ*2* analysis. Statistical significance was set at *P* < 0.05. SD: Standard deviation; BMI: Body mass index; KOA:Knee osteoarthritis; HSS: American hospital for special surgery knee score. Group A: Arthroscopic debridement group; Group B: Conservative treatment group.

Table 2 HSS score of the two groups before and after treatment

	N	HSS score, mean ± SD					
		Before treatment	1st mo after treatment	3rd mo after treatment	6th mo after treatment	12th mo after treatment	24th mo after treatment
Group A	98	78.65±11.20	87.76±9.10	91.08±5.67	91.88±6.48	92.18±5.90	92.08±5.85
Group B	80	79.10±11.41	85.05±10.21	87.19±9.32	87.46±9.91	87.79±9.59	87.31±10.15
t-value		0.263	-1.867	-	-	-	-

t'-value	-	-	-3.277	-3.433	-3.584	-3.729
P-value	0.793	0.064	0.001	0.001	0.000	0.000

Note: Statistical significance between the two groups was tested by *t* test or *t'* test. The comparisons between HSS score before treatment and HSS score at 1, 3, 6, 12 and 24 months after treatment were performed by analysis of variance. Further pair comparisons of multiple data were conducted with S-N-K method (*q* test) when variance was homogeneous, or Games-Howell method when variances was not homogeneous. Statistical significance was set at $P < 0.05$. N: Number of patients of the two groups; SD: Standard deviation; HSS: American hospital for special surgery knee score. Group A: Arthroscopic debridement group; Group B: Conservative treatment group.

Table 3 VAS score at walking time of the two groups before and after treatment

		VAS score,	mean ± SD			
	N	Before treatment	1st mo after treatment	3rd mo after treatment	6th mo after treatment	12th mo after treatment	24th mo after treatment

Group A	98	4.06±1.55	1.73±1.63	1.31±1.44	1.04±1.41	0.94±1.29	0.94±1.26
Group B	80	4.08±1.47	2.45±1.58	1.63±1.39	1.35±1.41	1.15±1.30	1.10±1.27
t-value		-0.060	-2.946	-1.493	-1.459	-1.081	-0.847
t'-value		-	-	-	-	-	-
P-value		0.952	0.004	0.137	0.146	0.281	0.398

Note: Statistical significance between the two groups was tested by t test or t' test. The comparisons between VAS score at walking time before treatment and VAS score at walking time at 1, 3, 6, 12 and 24 months after treatment were performed by analysis of variance. Further pair comparisons of multiple data were conducted with S-N-K method (q test) when variance was homogeneous, or Games-Howell method when variances was not homogeneous. Statistical significance was set at $P < 0.05$. N: Number of patients of the two groups; SD: Standard deviation; VAS: visual analogue scale. Group A: Arthroscopic debridement group; Group B: Conservative treatment group.

Table 4 VAS score at rest time of the two groups before and after treatment

	N	VAS score,	mean ± SD			
		Before treatment	1st mo after treatment	3rd mo after treatment	6th mo after treatment	12th mo after treatment	24th mo after treatment

Group A	98	1.22±2.03	0.49±1.19	0.02±0.14	0.02±0.14	0.02±0.14	0.02±0.14
Group B	80	1.21±2.01	0.68±1.39	0.21±0.59	0.21±0.59	0.21±0.59	0.21±0.59
t-value		0.039	-	-	-	-	-
t'-value		-	-0.942	-2.851	-2.851	-2.851	-2.851
P-value		0.969	0.348	0.005	0.005	0.005	0.005

Note: Statistical significance between the two groups was tested by t test or t' test. The comparisons between VAS score at rest time before treatment and VAS score at rest time at 1, 3, 6, 12 and 24 months after treatment were performed by analysis of variance. Further pair comparisons of multiple data were conducted with S-N-K method (q test) when variance was homogeneous, or Games-Howell method when variances was not homogeneous. Statistical significance was set at $P < 0.05$. N: Number of patients of the two groups; SD: Standard deviation; VAS: visual analogue scale. Group A: Arthroscopic debridement group; Group B: Conservative treatment group.

Best regards,

Kai Huang