Efficacy of ultrasound-guided radiofrequency ablation for genicular nerve in patients with chronic knee pain after total knee arthroplasty

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BACKGROUND

Total knee arthroplasty (TKA) is a commonly performed operation for Knee OA. But, 20% of patients experience chronic pain after TKA. (Treede RD, 2015)

Some studies have reported the efficacy of radiofrequency ablation (RFA) for genicular nerve in chronic knee pain. (Iannaccone F, 2017)

INTERVENTINAL TECHNIQUE

The genicular area with tenderness was prepared, the radiofrequency needle (22G, Active-tip 5mm) was inserted in the plane of the ultrasound probe in the long-axis view.

RFA was performed 80°C for 90 seconds.

The placement of the needle-tip was confirmed under X ray.

PURPOSE

We aimed to evaluate the efficacy of ultrasound-guided RFA for genicular nerve in patients with chronic knee pain after TKA.

SUBJECTS

Chronic knee pain after TKA

Genicular nerve block by local anesthetics

Positive

Negative

Positive group was patients who reduced pain more than 50% by diagnostic genicular nerve block by local anesthetics.

RFA for Genicular nerve

OUTCOME MEASURE

Pain intensity was assessed by Numeric Rating Scale (NRS 0-10) and knee disability was assessed by The Western Ontario McMaster OA Index (WOMAC). Each assessment was observed before procedure (baseline) and at 2, 4, 8, 12weeks after procedure.

DEMOGRAPHIC DATA

Characteristics	14 knees of 10 pts
Age (years), Gender (M/F)	76.7 ± 1.1, 4/15
Pain duration (years)	5.1 ± 2.2
NRS score (0-10)	7.1 ± 1.1
WOMAC score (0-100)	76.9 ± 10.3

RESULTS

NRS

WOMAC

RFA treatment was observed to result in good clinical efficacy for at least 8 weeks.

No serious complication was found in any patient.

CONCLUSION

Ultrasound-guided RFA for genicular nerve could be safe and beneficial treatment in the patients with chronic knee pain after TKA.

SUMMARY

In 10 patients with knee osteoarthritis-related chronic pain (14 knees), we performed ultrasound-guided RFA for genicular nerve and assessed the efficacy of RFA.