# The Difference of Pressure Pain Threshold on Masseter Muscle in Patients with Myofascial Temporomandibular Disorders Before And After Treatment With Occlusal Splint (Research)

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## Introduction

Myofascial pain syndrome is defined as pain of muscular origin that originates in a painful site in muscle, while in myofascial TMD the pain is located in TMD area. Muscle pain, tenderness, and spasm are characteristics of myofascial pain syndrome. Occlusal splint has been the preferred modalities in the management of myofascial TMD. Now controversy exists in reporting the success rate of myofascial TMD treatment, therefore the thorough study had been made. The purpose of this study was to give objective evidence to the assessment of treatment effect of occlusal splints. This was done by measuring the differences of pressure pain threshold (PPT) of masseter muscle in patients with myofascial TMD before and after treatment with occlusal splint.

## Material and Method

The study design was a quasi-experimental. Myofacial Pain Syndrome (MPS) was diagnosed by historic and physic examination. The sample consists of 11 women and 7 men aged 21-38 years treated with occlusal splint for 8 weeks. The algometer was used to measure the pressure pain threshold (PPT) before and after treatment. PPT measurement were determined for left and right masseter muscles on 3 areas : superior, middle and inferior

## Result

| | Before Treatment | | After Treatment | |
|---|---|---|---|---|
| Left masseter | | | | |
| Superior | 0.94 | (0.642) | 1.76 | (0.484) |
| Middle | 0.87 | (0.580) | 1.78 | (0.549) |
| Inferior | 0.82 | (0.605) | 1.84 | (0.525) |
| Right masseter | | | | |
| Superior | 0.92 | (0.643) | 1.73 | (0.606) |
| Middle | 0.72 | (0.570) | 1.78 | (0.549) |
| Inferior | 0.76 | (0.489) | 1.84 | (0.525) |

Table 1. Pressure Pain Threshold (PPT) of Masseter Before and After Treatment

The result from the t test revealed that there are significant increases in all variables respectively : right masseter superior, middle and inferior (t 7.07, $p<0.001$; t 7.64, $p<0.001$; t 7.60, $p<0.001$) left masseter superior, middle and inferior (t 7.75, $p<0.001$; t 8.33, $p<0.001$; t 9.03, $p<0.001$).

Picture 1 :
PPT measurement of superior masseter

Picture 2 :
PPT measurement of middle masseter

Picture 3 :
PPT measurement of inferior masseter

Picture 4 :
Occlusal view of occlusal splint

Picture 5 :
Lingual view of occlusal splint

## Conclusion

The increase of pressure pain threshold of masseter muscle reveals that occlusal splint is an effective tool to treat myofascial pain

## References

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