

## Physiotherapy in trismus

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Trismus is a condition and is not a disease itself and may impair eating, impede oral hygiene, restrict access for important dental procedures and adversely affect speech and facial appearance.

We report a case of 12-year old child who had

trauma and underwent a maxillofacial surgical procedure and developed trismus. He was treated conservatively with physiotherapy and had effective relief within half month of treatment. (Rawal Med J 202;46:488-489).

**Key words:** Trismus physiotherapy, mouth.

### INTRODUCTION

Restricted mouth opening is a common symptom in oral and maxillofacial surgical practice. It can be articular or extra-articular. Trismus (lock jaw) is prolonged tetanic spasm of the jaw muscles. Causes can be trauma, neoplastic, neuromuscular, reactive, congenital, psychogenic and drug induced.<sup>1</sup> A study from Karachi, Pakistan showed that three most common causes were oral sub mucosal fibrosis, infection and trauma.<sup>2</sup>

The diagnosis is based on history, clinical examination, radiography.<sup>1</sup> The different treatments are used. Physiotherapy is used to reduce pain, swelling, to soften the tight structure and increase the ROM and strength of muscle to restore the function of oral cavity.<sup>1-3</sup> We report a case of trismus successfully treated by physiotherapy.

### CASE PRESENTATION

A 12 year old boy was referred by a dental surgeon to the physiotherapy Department, Sheikh Zayed Bin Sultan Nahyan Hospital CHM, Muzaffarabad, in March 2020. He fell three month ago from roof and underwent maxillofacial surgery; now he had healed scar. He had pain and difficulty in opening of mouth, especially while having food, speaking and brushing. On examination, he had restrictions in mandibular movements. Pain measured on Wong Baker face pain rating scale<sup>4</sup> was 4 when he opened mouth forcefully. Physiotherapy including soft tissue mobilization, Maitland mobilization grade 1 to 4, range of motion exercise, hot pack, ice-cream sticks was initiated and patient carried out the exercise at home under the supervision of physiotherapist with full

instructions. All physiotherapy regimes was taken from previous studies.<sup>3,5-7</sup>

The patient was reassessed/evaluated on 5<sup>th</sup>, 10<sup>th</sup> and 15<sup>th</sup> day and the findings of gradually improvement occurred (Table). After the 15 days, he was discharged from physiotherapy department and was instructed to follow the home exercise plan regularly.

**Table. Physiotherapy used and results.**

Physiotherapy intervention	1 <sup>ST</sup> DAY	5 <sup>TH</sup> DAY	10 <sup>TH</sup> DAY	15 <sup>TH</sup> DAY
Soft Tissue Mobilization	Yes	Yes	No	No
Maitland Mobilization(grade 1&2)	Yes	Yes		
Maitland Mobilization(grade 3&4)			Yes	Yes
Range of motion exercise	Poor	Poor	Fair	Good
Hot Pack	Yes	Yes	Yes	Yes
Ice Cream Stick Inserted	3 Inserted	5inserted	6inserted	7inserted
Home Exercise Program: Protraction Retraction Opening Closing Later Deviation Self mobilization	5set*3time/Week Yes	5set*3time/Week Yes	10set*3time/Week Yes	10set*3time/Week Yes
Wong Baker Face Pain rating scale	4	3	2	0
Mandibular movement out of five grade (one mean minimal and five mean complete ROM)	2	2	3	4

## DISCUSSION

In trismus, aim of the physiotherapy is to decrease pain, reduce the swelling, soften and mobilized scar structure, increase the strength of mastication muscle and increase the range of motion of joint. To reduce swelling, range of motion exercise is used. The pain decreased by Maitland mobilization and hot packs.

Several previous studies have showed that range of motion exercise, soft tissues mobilization, Maitland mobilization, hot pack, self mobilization were effective and improved function of oral structure.<sup>3,6-9</sup>

Majority of cases were reported in dental setups and majority were advised to carry out exercise at home after discharge but were not referred from dental department to the physiotherapy department.

A RCT may be conducted on this condition for generalized result of given physiotherapy regime

There is need to provided awareness amongst patients, clinicians and physiotherapist about the role of physiotherapy in this condition. In summary, trismus is condition which can be effectively treated by physiotherapist by the means of different regimes.

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**Conflict of Interest:** Informed consent was obtained from parents of the patient before reporting the case.

Rec. Date: Sep 29, 2020 Accept Date: May 28, 2021

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