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## REVIEW ARTICLE

### ORTHODONTIC PAIN MANAGEMENT –A REVIEW

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#### ABSTRACT

Pain is a common problem during orthodontic treatment. Many a times patients complaint that he/she is feeling pain just after appointment. There are several ways to reduce orthodontic pain like pharmacological non-pharmacological management. In pharmacological management there are several medicines that reduce orthodontic pain like paracetamol, ibuprofen etc. In non-pharmacological management there are LLLT, chewing gums, dietary management, psychological management etc.

##### Key words:

Orthodontic Pain,  
LLLT, drugs in Orthodontics,  
Pain Control.

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## INTRODUCTION

Patient undergoing active orthodontic treatment feels pain and discomfort. These are very common complications and almost every patient complains about this. Generally patient feels pain from night and it continues for next few days. It is mainly due to the inflammatory mediators that accumulate in the pdl. This pain can be easily managed by pharmacological and non pharmacological treatment (Koritsánszky *et al.*, 2011). Fixed orthodontic appliance causes greater pain than removable appliance (Sergl *et al.*, 1998). The perception of pain varies among individual.

**Pharmacological management of orthodontic pain:** There are several drugs that effectively reduces orthodontic pain. Like paracetamol, ibuprofen etc. These drugs are very much effective in reducing orthodontic pain.

- **Paracetamol:** Paracetamol is routinely prescribed for the treatment of orthodontic pain. It is safest NSAID with very few side effects. More over it does not hamper tooth movement. Paracetamol 650 mg has to be taken twice daily for effective pain control. It is generally advised after orthodontic separator placement and just after appointments if patient feels pain. Studies have shown that there is no significant difference in pain management by paracetamol and ibuprofen.

- **Ibuprofen:** Ibuprofen reduces pain in initial stage of treatment (Angelopoulou *et al.*, 2012). Ibuprofen 400mg has to be taken one hour before, two hour after and seven hour post operatively. It is a safe drug with fewer side effects. But according to some orthodontist ibuprofen is ineffective in reducing orthodontic tooth movement. According to study it decreases orthodontic tooth movement (Possi *et al.*, 2011). It is better to avoid ibuprofen if patient has any systemic problems.
- **Meloxicam:** Meloxicam 7.5 mg can reduce pain almost same as compare to 650 mg paracetamol. But it is not routinely prescribed for some adverse effects.

#### Non pharmacological management

- **Low level laser therapy (Cruz *et al.*, 2004):** Low level laser therapy gives satisfactory result in reducing orthodontic pain. Single dose helium-neone laser can be used for this purpose. LLLT also found to accelerate tooth movement by increasing the remodeling capacity of bone. But more studies are needed for effective use of laser for this purpose. Beside this there are several hazards related to laser therapy like eye damage, ablation, shock etc.
- **Chewing gums:** Chewing gums and bite wafers significantly reduce orthodontic pain and discomfort associated with active treatment. Though some orthodontists recommend not to chew gums during

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treatment, there is no evidence that it debonds brackets (Benson *et al.*, 2012).

- **Systemic acupuncture:** Systemic acupuncture by professionals was found to be effective in reducing orthodontic pain (Boleta *et al.*, 2014). So this method can be undertaken in case of continuous pain from active orthodontic treatment.
- **Dietary modifications:** Patient is advised to go through brace friendly diet (Paul *et al.*, 2011). Hard and cheesy foods have to be avoided to prevent pain as well as bracket debonding. During orthodontic treatment some patient does not take adequate diet due to discomfort and pain. So that should be taken care of. So orthodontist should guide the patient to take proper diet and mainly soft nutritious diet (Cunningham *et al.*, 2012). Special care should be taken to maintain oral hygiene. Most of the discomfort occurs from poor oral hygiene. So patient is advised to undergo warm saline rinse twice a day. Chlorohexidine mouthwash for short period of time can also be given.
- **Psychological treatment:** Psychological treatment is very much effective in reducing orthodontic pain. Patient has to be told about the pain that he may feel. Patient has to be told that this pain is temporary and will subside within a few days. If several problems arise that can be manage easily by several ways. Patients and orthodontists should have a good professional relation. This gives patient a psychological benefits. A recent study showed that follow up by telephone after appointment is a good way give patient a psychological benefit (Cozzani *et al.*, 2016).

### Conclusion

In conclusion it can be said that there are several way to decrease pain originating from orthodontic treatment. Orthodontists should find out the pain threshold level of the patient and treat the patient accordingly. It is better to go for non pharmacological treatment. But if it does not work orthodontists should prescribe drugs taking care of medical history of the patient.

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