

## Part III

### Forms of malpractice by Straight Wire Orthodontics

#### Malpractice, Variation 1, Straight Wire Orthodontics

Mesial (+) angulation of upper first molar crowns :

#### Key I and Key II of Straight wire Anatomy / Orthodontics (Andrews)

Extrusion of distal cusp of upper first molars by Key I and Key II angulation:

- Precontacts with lower teeth, occlusal dysfunction during lateral function, Fig 15d
- TMJ dysfunction by vertical lever arms on prominent distal cusps of upper 1st molars, Fig. 16 / 17



**Fig 15b:** Key I and Key II ,Straight wire orthodontics

#### **Malpractice Variation 1a) Straight Wire Orthodontics:**

**Upper first molar angulation in relation to lateral function and TMJ**



**Fig. 15c:** static occlusion -



**Fig. 15d:** dysfunction in lateral action by angulation of Key I, II of maxillary molar

The mesial angulated upper molar of Key I and Key II of straight wire Orthodontics implicates a prominent distobuccal cusp, a classical traumatic factor during action and prime factor for TMD, CMD and complex parodontal diseases for molars and premolars.

[Koeck B., Fuhr K., Reiber T.: Funktionsstörungen des Kauorgans, 1995, Urban-Schwarzenberg, p.100]

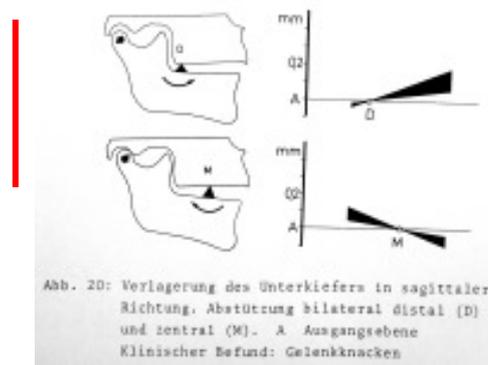
**Malpractice Variation 1b) Straight Wire Orthodontics:  
Upper first molar angulation in relation to vertical function and TMJ**



**Fig. 16a** angulation before treatment



**Fig. 16b** angulation after straight wire treatment with prominent distal cusp with lever effects for TMJ



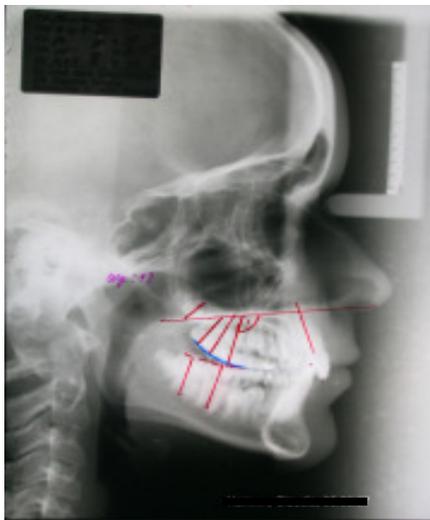
**Fig. 17** Lever effects for TMJ by precontacts of distal cusp of upper 1<sup>st</sup> maxillary molars, P. Ludwig, Habilitation 1976

[“Funktionelle Kiefergelenksbelastung und Unterkieferdeformation“, Habilitationsarbeit Dr. Peter Ludwig, 1976 Zahnärztliche Prothetik Univ. Erlangen, Prof. Dr .M. Hofmann]

## Malpractice Variation 2, Straight Wire Orthodontics:

### **Key II and Key VI of Straight wire Anatomy / Orthodontics by Straight Wire Techniques misusing growth**

- Mesial and downwards rotational moments of upper molar crowns by first NiTi levelling arch
- Mesial rotation of the entire upper dentition causing complex occlusal dysfunction and preconditions for CMD, TMD and parodontal diseases.
- Excessive vertical bone growth downwards and forward of distal part of maxillary cavity and of distal part of alveolar bone, irreversible damage for life, or a dubious repair by surgery of upper and lower jaws
- Elimination of Curve of Spee
- Severe change of occlusal plane



**Fig. 18 a before treatment**



**Fig. 18 b after Straight-Wire--Treatment**



### **Malpractice by a five years Straight-wire- Treatment**

- the entire anatomic and functional basis and statics of bones, teeth and muscles up to the curved spine is ruined
- irreparable damage by wrong bone growth with wrong statics for TMJ and parodontium, a damage for life
- Misuse of growth as an adaptive support
- Risk for crowns, bridges, implants and liability
- No informed consent, liability for malpractice

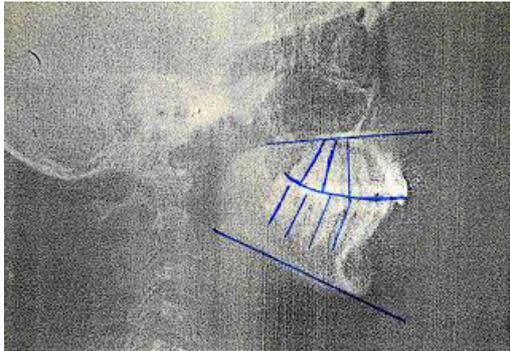
**Fig. 18 c**

## Malpractice Variation 3, Straight Wire Orthodontics:

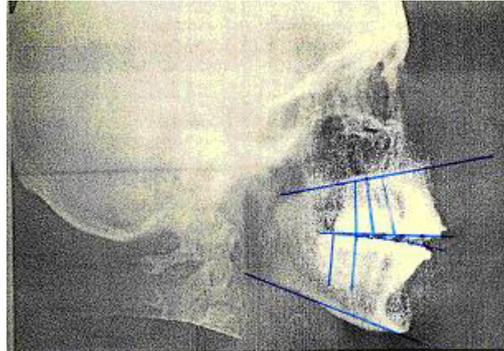
### **Straight Wire Orthodontics without growth, international case presentation - A similar case as before without growth -**

***“A relatively minor adult case becomes significantly complex:  
A lesson in humility”***

[Inf. Orthod. Kieferorthop. 2002; 34 //  
Am. J. Orthod. Dentofacial Orthop 2001, Volume 119, number 5, p 546]



**Fig. 19 a** before treatment with Curve of spee, ideal tooth angulations



**Fig. 19b** after 4 months of Straight wire-treatment, molar extrusion, wrong angulations

- *„After 4 months of treatment, an open bite from second premolar to second premolar was noted.*
- *After 6 months of treatment, the patient expressed concern with her chin position and mentalis hyperactivity.*
- *The patient indicated that she had been having severe gastrointestinal problems over the previous months, with numerous vomiting episodes.*
- *It was apparent that the orthodontic treatment had resulted in molar extrusion, which the musculature was not able to withstand.*
- *Treatment continued and the case was set up for posterior maxillary impaction and mandibular advancement surgical procedures.”*

### **International orthodontic discussion:**

*“Finally I frankly admit, that in this case probably nothing would have been able to prevent the open bite, even not by ideal biomechanics.  
This case was difficult from the very beginning and we have the capital advantage, that a competent orthognatic surgery is rescuing the orthodontists again and again.”*

### **Straight wire Orthodontics and its aftereffects without growth:**

- molar extrusion, downwards and mesial
- wrong angulations of all upper and lower teeth
- occlusal dysfunction
- Angle Class II dental relations
- Straightened Curve of Spee
- TMD / CMD-Diseases in a short time due to lack of growth.
- Straight wire orthodontics - a severe and complex misuse of patients.

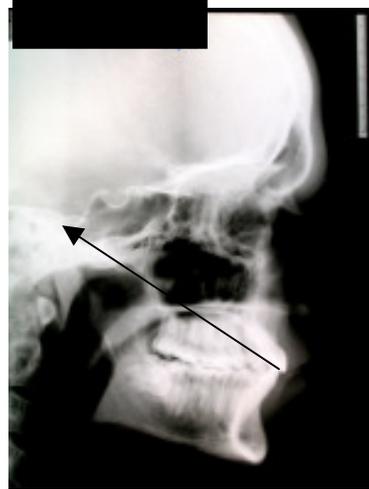
## Malpractice Variation 4, Contemporary Orthodontics :

### **Precontacts in the front by:**

Treatment of Class II as a result of growth or aftereffect of straight wire levelling by means of extractions of upper first premolars and retraction of upper front.



**Fig 20a.**  
Extraction of first upper premolars



**Fig 20b**  
Retraction of upper front with precontacts in the front and destructive distal vector for TMJ

### **Aftereffects of precontacts of centrals:**

- forcing the condylus into the utmost distal position means the worst position for TMJ-function and precondition for Temporomandibular Dysfunction TMD, Tinnitus, Nausea, local dental overloading with loss of bone and frontal parodontitis.