

Beggs Technique : Revisiting Old Glory

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Begg technique is based on a unique approach to treat the orthodontic cases by using light forces with the objective of moving the teeth with optimal forces. The advantages of this technique includes-

- The light forces are used so that the position of the molars is not affected because of which anchorage conservation is easier.
- The teeth are designed to move independently of one another so that various type of movements of various teeth are possible at the same time.
- Movement of all teeth towards & beyond their desired final position is initiated at the start of treatment so that finally we achieve the over corrected position of the teeth to compensate for the relapse.
- Arch wires and inter maxillary elastics are placed at the bonding appointment itself which would cause immediate reduction of overjet and overbite.
- The treatment results are usually rapid and it requires fewer visit (once in 6 weeks).

However, the shortcomings in Beggs technique are:

- Patient cooperation is critical for successful treatment.
- Distortion of light arch wires by the mastication of tough foods or by biting on hard objects result in malformation of the appliance, a problem frequently encountered in stage I resulting in damage to the arch wire mainly in the section between mandibular molars & canines.
- Tissue trauma is thought to occur at the alveolar crest as a result of tipping. Excessive tipping at the apices of maxillary incisors against the labial cortical plate during various stages of Beggs technique especially stag III may also lead to root resorption.
- Steepening of an existing high mandibular plane angle may occur as a result of class II intermaxillary traction especially in high angle cases.
- Beggs technique does not lend itself to intrusion of maxillary anterior teeth when

a deep overbite is associated with over eruption of maxillary incisors rather than over eruption of the mandibular incisors. Thus there is absence of true intrusion.

- Lack of understanding of the complex dynamics of the force systems & important details in treatment can lead to discouraging experiences for the inexperienced operator.
- The presence of these shortcomings along with advent of simple straight wire technique has drastically reduced the use of Beggs technique. However, with proper understanding of the biomechanics concept and the dexterity in wire bending, Beggs technique can give results comparable to straight wire technique in smaller intervals of time, atleast in properly selected cases. A case report of patient treated with Beggs technique is described to support it.

Case Report

A 18 year old female patient reported to us with a chief complaint of irregularly placed lower and forwardly placed upper front teeth. On extra-oral examination, it was found that patient has a mesocephalic head type, mesoprosopic face type with an oval facial form. The face was near symmetrical. The profile was mild convex with posterior facial divergence. The Mandibular plane angle was increased. The lips were incompetent with a normal mentolabial sulcus and an obtuse nasolabial angle. Intraoral examination revealed a Class-I molar relationship and Class-I Canine relationship bilaterally with minor crowding in upper and lower arch, 4mm overjet and 0.5mm overbite. (Fig 1.1 to 1.3)

All the four first premolar extraction was decided in this case and Beggs mechanics was chosen to treat this case.

Results

The total treatment duration was 14 months (Stage-I for 3 months, Stage II for 5 months and stage-III for 6 months) (Fig. 2.1 to 2.3). The post treatment overjet, overbite and molar relationships were normal and profile of patient had improved as shown Fig 3.1 to 3.5)

Discussion

The Beggs technique was used in this case because of very small overbite (0.5mm) and slightly increased overjet. As a result we expected stage I to last for 2-3 months only. Also, we planned to use less anchor bend during treatment as mandibular plane angle was on the higher side and overbite was only 0.5mm. Also, if straight wire technique was used in this case we may had to do second molar banding or use microimplant to fully retract the six anteriors together. However with Beggs technique it is not at all required.

The straight wire technique is the most popular technique in orthodontics in the present era. However, the Begg technique can still prove to be a handfull in properly selected cases. The bimaxillary protrusion cases with normal overbite is one such condition, where it can be used. Also a fact that is generally not given enough importance is that the proportion of Indian orthodontic patients who have some degree of dentoalveolar protrusion needing correction is high as compared to their western counterparts. This itself makes the Begg appliance a reckonable treatment modality. The free tipping andretraction of the anterior segment that can be achieved with this appliance without resorting to too many anchorage- enhancing auxiliaries, is a definite advantage over the PEA (Fig.4). Various studies have claimed a reduced time required for treatment of cases with the Begg appliance.

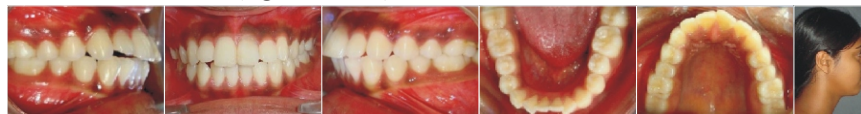
Summary

The Beggs technique is still relevant in present day orthodontic practice. The faster results in properly selected cases, less appointments requirement and use of armamentarium of reasonable cost makes the knowledge of Beggs mechanics helpful and necessary for orthodontist.

References

1. Begg, R, Kesling, PC. Begg Orthodontic Theory And Technique. 3rd ed. Philadelphia: W B Saunders Company 1977.
2. Fletcher GGT. The Begg appliance and technique. Wright. PSG; Bristol, 40. 1981.
3. Buchanan, Russell, Clark. PAR-based comparison of Begg and PEA techniques. JO 1996;23:351-7.
4. Proffit WR. Contemporary Orthodontics Mosby 2000;3rd ed.
5. Col V Sharma, Col J Sengupta. Modifications to Increase Efficiency of the Begg Orthodontic Technique. MJAFI 2009; 65 : 118-122

Intraoral Pre-Treatment (Figure 1.1 to 1.5)



Stage-III (Figure 2.1 to 2.3)



Post debonding with retainers and post treatment profile photograph (Figure 3.1 to 3.6)

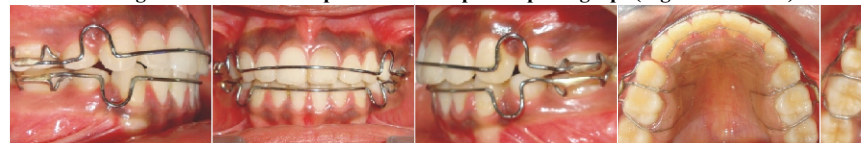


Figure 4

