

Clip –On Power Arm

Harshit Vyas

Abstract:- The use of invasive techniques (using bone anchored implants) in modern dentistry is taking over the conventional methods of intrusion and space closure. Banding along with soldering and welding processes is difficult and time consuming in daily clinical practice. This Clip - On power arm can be used for purpose, intrusion and space closure simultaneously and effectively.

I. INTRODUCTION

Traditional use of power arms for intrusion and space closure to direct the force close to the centre of resistance and bring about translation¹ has declined due to the cumbersome procedure of soldering or welding associated with it. This could be one of the reasons leading to rampant use of implants these days. Therefore, we devised a modification of power arm to clip it on to the molar tube.

This Clip – On Power arm eliminates the need to remove the band to solder or weld the power arm onto the molar tube and re-cement it, thereby reducing the chair-side time. The frequent breakages with the welded joint of the power arm can be avoided. The clip- on power arm can be removed once the space closure is completed.

The height of the Clip-On Power arm can be adjusted by simple wire bending with the requirement of the treatment needs without any invasive procedures.

II. DESIGN

For use with a round tube, a 0.018 X 0.025 stainless steel wire is used to make a hook and a long vertical arm which is bent in the direction in which the hook is facing, this horizontal arm is then bent into a 'U'. The end of the 'U' is bent upwards. (Fig 01A, 01B, 01C)

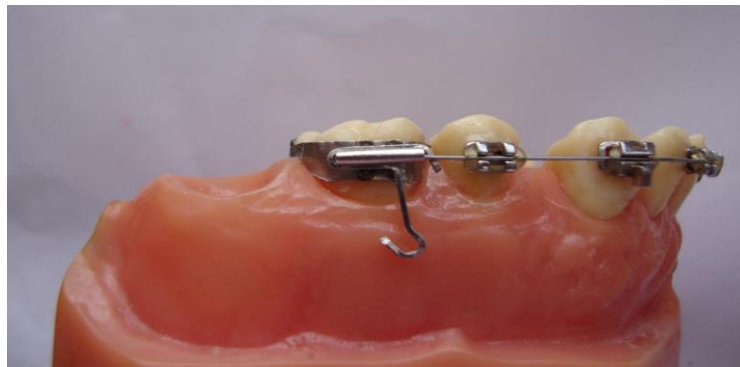


Fig 01(A) - power arm can be clipped on by closing the 'U' bend.



Fig 01(B & C) - power arm on the round tube

The power arm clip is inserted from the distal of the molar tube and locked by closing the 'U' bend. The same design can be used on both sides of the arch.

For use with a headgear tube, the two horizontal arms of the 'U' are pressed together and inserted from the distal end of the tube. (Fig 02A, 02B)

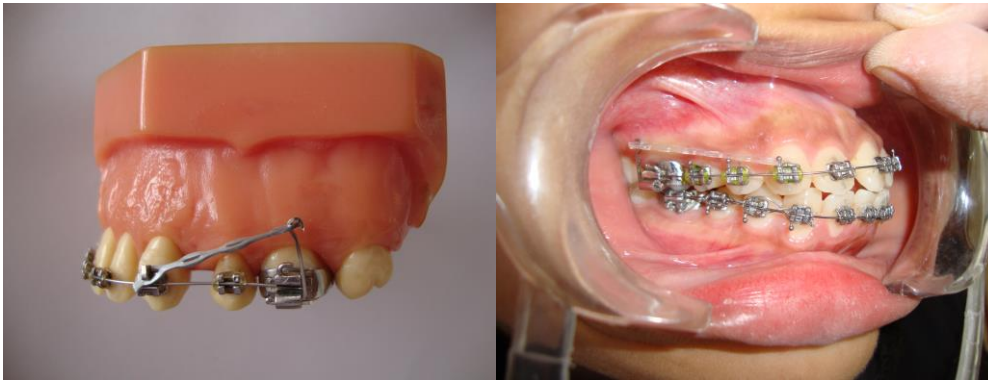


Fig 02 (A&B) - power arm in the headgear tube

For use with the accessory tube of a Pre adjusted edgewise appliance, a 0.016 X0.022 stainless steel wire is used. A hook is made on a vertical arm which is bent mesially, inserted into the accessory tube from the distal end and cinched, to prevent the free movement of the wire in the

tube and to prevent any undesired movements of teeth, caused by the rotation of wire. (Fig 03A)

The power arms remain stable with or without elastics

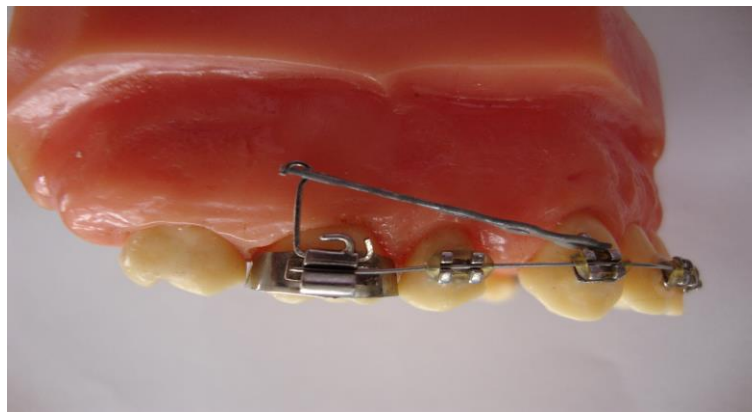


Fig 03(A) - power arm in the accessory tube

III. CONCLUSION

- Clip- On Power arm is a non invasive approach for intrusion as well as retraction.
- The height of the Clip- On Power arm can be easily manipulated with simple wire bending approach.
- Less discomfort to patient reducing chair side time.
- The power arm clip is inserted from the distal of the molar tube and locked by closing the 'U' bend. This eliminates the recementation of molar bands and cumbersome soldering of hooks to the arch wire or molar bands.
- The Clip-On Power arm can easily be removed after the purpose has been served.
- The use of stainless steel archwire provides rigidity and strength as well as they are less costly.
- No specialized instruments are needed for the wire bending procedures.
- This Clip-On Power arm can be used with different fixed appliances.

REFERENCE

- [1.]Nanda R, Ghosh J. Biomechanical considerations in sliding mechanics. In: Nanda R, ed. *Biomechanics in Clinical Orthodontics*. Philadelphia, Pa: WB Saunders; 1997:188–217