

## Using Biomechanical Principles In Collar Selection For Patients Complaining Cervical Disc Prolapse

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**Abstract : Objective :** Using cervical collar in management of cervical disc prolapsed has a controversial and different outcomes. So, proper selection of collar is very important for obtaining best results. **Design:** One hundred subjects suffered from cervical disc prolapse; complaining neck pain and brachialgia; were participated in this study. They were classified into five equal groups; group one had no collar, group two applied soft collar, group three applied hard collar (one piece), group four applied Philadelphia collar and group five applied two pieces variable length collar (Adjusted according to length of patient's neck to be put in a slight flexion). Visual analogue scale was applied for all patients to measure the degree of brachialgia. Electronic Goniometer or Cervical range of motion (CROM) was used also to determine painless range of motion (ROM) of neck extension. Assessment was performed before and after treatment (Twelve sessions; three times per week). **Results:** Results revealed a significant improvement in patients applied both Philadelphia and variable length collar in both VAS and ROM with more evidence for variable length collar. **Conclusion:** Variable length collar is the best choice for patients complaining cervical disc prolapsed with brachialgia.

**Key word :** *Soft collar ; one and two pieces hard collar ;Philadelphia collar ;Cervical disc.*

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