SUMMARY AND CONCLUSION

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Because the cervical region is the most distinct region of the spine regarding its anatomical and biomechanical chriteria, a patient with suspected cervical disc prolapse should have a carefull examination including meticulous clinical examination, radiological and neurophysiological studies, putting into our mind the pssible other pathologies that may mimic cervical disc prolapse.

In the absence of any absolute indication for surgery, a patient with cervical disc prolapse is treated conservatively for adequate period of time. Failure of conservative measures or the presence of absolute indications for surgery mandate the surgical option which may be approached anteriorly or posteriorly. If there is any suggestion of instability then a posterior approach is best avoided and the anterior approach should incorporate fusion and bone graft.

Anterior cervical discectomy and fusion was first described by Smith and Robinson and also by Cloward in the 1950s. Initial attempts were performed without anterior plate fixation. Initially, iliac crest autograft was placed as the interbody spacer. Although an excellent material to promote interbody fusion, it is associated with harvest site–related morbidity in up to 25% of patients. The potential for donor site infection and pain are limitations of its use. Consequently, allograft eventually replaced iliac crest autograft as the most typical choice for an interbody spacer. When allograft is used for ACDF without anterior plate fixation, successful fusion has been reported in 90% of single-level surgeries; however, in cases requiring two-level surgeries, the fusion rate decreases to 72% when allograft is used without supplemental plate fixation (*DiAngelo et al; 2003*) Anterior cervical plate fixation significantly improves the successful arthrodesis after single-level ACDF. A 96% fusion rate has been reported when allograft is combined with anterior cervical plate fixation. In cases requiring two-level surgery, a 91% fusion rate has been reported when

allograft is used in conjunction with anterior plate fixation (*DiAngelo et al; 2003*).

Drawbacks of allograft interbody spacers include their limited supply, irregular dimensions, and risk of transmitting infection (viral or bacterial)(*DiAngelo et al; 2003*)

Recently, synthetic materials have been developed in an effort to overcome these limitations. New synthetic spacers, such as PEEK(poly-ether-ether-ketone) or rhBMP-2 (recombinant human bone morphogenetic protein–2) are unlimited in supply, have regular dimensions, are nonabsorbable and radiolucent, and do not risk the transmission of infection from the donor. When PEEK interbody spacers are combined with and anterior cervical plate fixation, we have found a 100% successful fusion rate (*Boakye et al; 2004*).