**Results:** Our search included 11 studies, 5 tear completion, 4 repair in situ and 2 were comparative of both techniques. Studies showed insignificant difference in clinical outcomes between both surgical procedures, both repair in situ and tear completion techniques produce good results in rotator cuff tears techniques thus both remain in their places in management of bursal side rotator cuff tears.
**Conclusion:** Both in situ and tear completion techniques remain in their places in management of bursal side rotator cuff tears. We suggest that the final consensus should be postponed until further studies are the future, systematic reviews & comparative studies with longer term follow up period are needed to evaluate and guide for the best arthroscopic management of bursal side rotator cuff tears.
**Key words:** Supraspinatus, Partial, Thickness, Bursal, Rotator, Cuff, Tears, Management, In Situ, Completion, Convergence, Arthroscopic

### Cortical Bone Trajectory Screw Fixation of Lumbar Spine in Adult Patients with Degenerative and Traumatic Spine Disorders

A.M. Elbadrawy, T.M.S. Elkhateeb and E.M.M.A. Hassan

From the Department of Orthopedic Surgery, Faculty of Medicine, Ain Shams University, Cairo, Egypt

Address correspondence to Dr Eslam Mohsen Mohammed Abdelrehim Hassan, c/o Department of Orthopedic Surgery, Faculty of Medicine, Ain Shams University, Cairo, Egypt. email: dreslammohsen1989@gmail.com

**Background:** the CBT for placing lumbar pedicle screws is a technique used to improve fixation during instrumented fusion of the lumbar spine. In comparison with traditional trajectory (TT) for pedicle screws, CBT screws (otherwise known as pars screws or cortical screws) have a more medial starting point and are aimed in a medial to lateral, caudal to cranial direction. First reported in 2009 as a method to increase the purchase of lumbar pedicle screws within bone.[1]
**Aim of the Work:** to perform a systematic review and meta-analysis to determine whether traditional Pedicles Screw Fixation (PS Fx) or Cortical Bone Trajectory Screw Fixation (CBT Fx); has been successful for the treatment and fixation of lumbar spine in adult patients with degenerative and traumatic spine disorders; and to compare the 2 techniques to identify risk factor for unfavorable outcome through the recent researches about that issue.
**Methodology:** this review was done using standard methodology outlined in the Cochrane Handbook and reported the findings in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) statement guidelines.
**Results:** meta-analysis study showed that;

1. Successful fusion rate in fixed and random-effects models were (92.24% respectively); in SP group.
2. Successful fusion rate in fixed and random-effects models were (92.44% respectively); in CBT group.
3. Fixed and random-effects models showed non-significant difference in successful fusion rate; between the 2 groups of studies ($p > 0.05$).

We calculated safety for each technique through post-operative (failed fusion rate).
**Conclusion:** Although there were insignificant p-values in the most of the comparative items but the CBT showed lower average of intraoperative blood loss, operation time and higher average of decrease in VAS & increase in ODI, slightly higher fusion rate in comparison with PS. So we recommend, the use of CBT as an acceptable alternative of PS in lumbar spine fixation.
**Key words:** Cortical bone trajectory, Lumbar spine, Degenerative and traumatic spine disorders, Crew fixation

Downloaded from https://academic.oup.com/qjmed/article/113/Supplement_1/hcaa059.018/5829428 by guest on 20 April 2024