



Polyetheretherktone (PEEK) cage filled with cancellous allograft in anterior cervical discectomy and fusion

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Liao J, Niu C, Chen W, Chen L.

Orthopedics, Chang Gung University, Chang Gung Memorial Hospital, Taoyuan, Taiwan.

From July 2004 to June 2005, 19 patients with 25 discs underwent anterior cervical discectomy and interbody fusion (ACDF) in which polyetheretherketone (PEEK) cages were filled with freeze-dried cancellous allograft bone. This kind of bone graft was made from femoral condyle that was harvested during total knee arthroplasty. Patient age at surgery was 52.9 (28-68) years. All patients were followed up at least 1 year. We measured the height of the disc and segmental sagittal angulation by pre-operative and post-operative radiographs. CT scan of the cervical spine at 1 year was used to evaluate fusion rates. Odom's criteria were used to assess the clinical outcome. All interbody disc spaces achieved successful union at 1-year follow-up. The use of a PEEK cage was found to increase the height of the disc immediately after surgery (5.0 mm pre-operatively, 7.3 mm immediately post-operatively). The final disc height was 6.2 mm, and the collapse of the disc height was 1.1 mm. The segmental lordosis also increased after surgery (2.0 degrees pre-operatively, 6.6 degrees immediately post-operatively), but the mean loss of lordosis correction was 3.3 degrees at final follow-up. Seventy-four percent of patients (14/19) exhibited excellent/good clinical outcomes. Analysis of the results indicated the cancellous allograft bone-filled PEEK cage used in ACDF is a good choice for patients with cervical disc disease, and avoids the complications of harvesting iliac autograft. PMID: 17639386 [PubMed - in process]