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ABSTRACTS

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Tagungspräsidenten:

Univ.-Prof. Dr. med. Steffen Ruchholtz, Marburg

Univ.-Prof. Dr. med. Maximilian Rudert, Würzburg

(W41.8)

The method of acetabuloplasty in patients with dysplastic hip arthritis who need total hip replacement using threaded ORTEN cups

Oleksandr Loskutov (UKR-Dnipro), O. Oleynik

Topicality

An acetabular dysplasia manifests with flattening of acetabulum, decreasing of acetabular walls' height especially in superolateral segment. To achieve the long-term cup stability during the total hip arthroplasty (THA) it is necessary to provide good bone covering of the cup using the filling of superolateral defect with bone grafts.

The objective of this study to estimate results of a new method of acetabular defect plasty in cases of dysplastic hip arthritis (DHA).

Methodic

From January 2010 to July 2011 in our clinic 55 patients with DHA (total 69 hips) were undergone total hip arthroplasty with ORTEN threaded cup. There were 5 males and 50 females. The mean age was $50,7 \pm 11,0$ years. Follow-up period was from 3 to 20 months. All joints were divided into types according to Eftekhari's classification: type A was present in 19 cases, type B – 23 cases, type C – 23 cases and type D – 4 cases. In 16 hips bone grafting was performed to fill in acetabular defect.

The new method of acetabuloplasty is based on the concept of the cementless cup with its own fixation. After acetabular bed preparing threaded cup ORTEN have been implanted. Such cup provide the stable primary fixation due to inside threading into the walls of acetabular bed. After this according to defect's volume it have been fill with bone chips without any additional fixation or bulk graft that have been fixated with screws. Such technics we called as free and constrained reverse bone grafting. No of type A hips needed bone grafting. Free reverse bone grafting was used in 4 cases (17,4%) in type B, 7 cases (30,4%) in type C and in 1 case in type D (25%). Constrained reverse bone grafting was used in 2 cases in type C (8,7%) and 2 cases (50%) in type D.

Results

A concept of cup with its own fixation allows that the grafts are situated out of loading. These grafts have good conditions for rapid remodelling and incorporation. The full remodelling of bone chips we have seen at 6 months after operation. For bulk grafts this period lasts about 1 year. All patients after THA with reverse bone grafting have had the standart course of rehabilitation. Bed regiment lasted up to suck drainages removing. After this patients walked using 2 crutches with partialy loading on operated leg during 6-8 weeks for free reverse grafting and 8-10 weeks for constrained reverse grafting. All patients have had 2 week in-department rehabilitation course. Then they might go without harness. The mean Harris Hip Score increased in these patients from $36,4 \pm 18,3$ points before operation to $83,6 \pm 8,2$ points at the last examination after surgery.

Discussion. We can conclude that concept of cup with its own fixation (threaded cup) in aggregate with reverse bone grafting provides good primary stability for cup and good conditions for grafts remodelling. Such combination ensures formation of valid acetabular bed in early time after operation.