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Appendix

RM Pressfit Cup

The RM cup has a market share of around 6% in Germany, 13% in Austria and 25% in Switzerland (Data on file by Mathys LTD Bettlach, Switzerland. access date 09/24/2019). In New Zealand, the RM Pressfit cup is the third most used cup in 2018 (The New Zealand Joint Registry 2019). In theory, there are advantages of a monoblock cup design compared with modular cups with regard to wear¹. The greater thickness of PE compared with modular cups of the same size provides for less wear, at least in the case of small cup diameters². The absence of “dome holes” prevents the penetration of PE wear particles into the retroacetabular space, which is created by the back-side wear between cup and insert³. Advantage of a modular cup is that the liner can be exchanged alone without the need of removing the cup. If it comes to revision, different techniques of cup removal have been described in the literature⁴⁻⁷. One of the most common techniques to remove a well ingrown modular cup is using curved gouges or special designed instruments like the Explant® Acetabular Cup Removal System by Zimmer (Warsaw, Indiana, USA) with different blades to loose the implant-bone interface, so that the cup can be extracted manually⁸⁻¹⁰. A powered development of this technique is the EZout System offered by Stryker (Stryker, Kalamazoo, MI, USA). These techniques claim to have a small loss of bone. They can be easily applied to a monoblock polyethylene cup like the RM Pressfit cup, too. A special technique to remove the RM Pressfit cup is described by Judas et al¹¹. They used powered acetabular reamers to remove the polyethylene until a thin layer was left which was taken out by hand tools. This technique was described for removal of cemented all-poly cups before¹². Another way to remove the RM Pressfit cup is to cut the cup in wedges (“pizza slice”) with a chisel¹³.

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