The Button Temporary Spacer

Definition, History

We were interested in the polyethylene cup described by B. Regnauld in 1975 [98, 99]. This cup provided good results particularly in hallux rigidus surgery. With B. Regnauld we first replace the polyethylene by stainless steel for providing better surrounding soft tissue and increasing the local tolerance. These cups were held by peripheral small holes. Then we devised the button prothesis or button spacer [16]. It is thicker than the Regnauld’s cup and it has a central hole allowing the primary fixation by an axial K-wiring (one month). This spacer has to be removed from six months to one year postoperative. Later we replaced the stainless steel by Zircone for it provides more mobility and better quality surrounding soft tissue. However the Zircone cup has absolutely to be removed before one year postoperative, since the long-lasting implanting results in abrasion of both the resected phalanx bases and the metatarsal head cartilage. Since there is more abrasion with Zircone than with stainless steel, we now only use stainless steel cup following the recommendations of M. Ragusa.

* M. Ragusa, Grenoble, France.

Fig. 22a1. The temporary button spacer. 1. Generalities.
1. From the Regnauld’s cup, made in polyethylene, we first developed a stainless steel cup, with B. Regnauld. Fixation by peripheral holes.
2. The button is in stainless steel. Fixation by temporary K-wiring.
3. The button in the first MTP joint: Note the preservation of the plantar part of the first phalanx basis, to keep the flexor brevis insertion, as indicated by M. Ragusa (Grenoble, France).
4. Button in lesser MTP joint.


**Technique**

First ray: *MTP joint*, respect of the metatarsal head cartilage (osteophytes resection only) and resection of the base of the phalanx trying to preserve a part of the flexor brevis insertion (M. Ragusa).

*IP joint*: Respect of the basis of the second phalanx and resection of the first phalanx head.

Lesser rays: *MTP joint*, respect of the phalanx base and minimum resection of the metatarsal head. Axial K-wiring (1.2mm) to be removed one month afterwards.

**Results**

Secondary displacements of the cup may occur but it is painless and ordinarily without consequences. However, a long-lasting incorrect position may provide oblique abrasion and secondary deviation of the joint, which indicates an earlier removal of the cup. The mobility of the joint is good and painless and the radiological aspect of the joint is correct. We used a lot of these spacers from 1985 to 1992, but we progressively stopped because of reliable osteosynthesis in first MTP fusion thanks to the “20” memory staple. Above all we had the possibility of MTP joint preservation on the first ray thanks to the easy first metatarsal shortening with scarf osteotomy on the lesser rays using the Weil metatarsal osteotomy. Both of these osteotomies provide such a longitudinal decompression that the MTP joint is opened very far. On the other hand, in the first MTP joint, the resection of the basis of the first phalanx (even when we try to preserve the flexor brevis insertion), results in diminishing the strength of the great toe ground contact. For this reason we now reserve the use of this cup for patients who do not want MTP fusion or in case of degenerative change in the corresponding interphalangeal joint. O. Jarde [72] devised a similar cup but with a small insertion in the phalanx base, providing more stability. Its main indication is impaired first MTP joint.

**Fig. 22a2. The temporary button spacer 2. Indications and results.**
1. A good indication on the great toe: Impaired IP joint combined with necessity of MTP fusion.
2. Long-time implantation results in abrasion of the fragments. The problem is that patients doesn’t feel any discomfort and must be convinced to have the implant removed.
4. Indications in lesser MTP joints. For a spondyloarthropathy forefoot, with MTP spontaneous fusion.