

Total Ankle Replacement: Back to the Future?

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When total ankle replacement began in 1970 [1] the trend was soon followed by lots of others. All designs were two-component replacements with Fixed Bearings (FB) intended for fixation with bone cement. Already at 5-year follow-ups most designs were given up because of major problems with loosening. A few continued to solve the problems, and from the beginning of the 1980s the three component designs with Mobile Bearing (MB) were introduced [2,3]. With results superior to the former two-piece devices, a new era was started, and nearly all new designs from the late 1990s were three component devices, and intended for non-cemented use. The good survival rates have been confirmed also with these devices. They have all lend features from the two original designs [2-4], and much more attention has been paid to restoring alignment and stability of the ankle and hindfoot. Recently, for unclear reasons, the trend is to use two-piece (FB) designs again. Maybe this is inspired by the possibility, on a 5-10 K basis, to introduce two-piece designs to the American market. These two piece designs are now hitting the market in numbers that equals the many designs in the 1970s. This is a cause of concern. The reason for introducing the MB designs was the inability for FB designs to find the correct position of the components. There is a widespread diversity not only in the normal anatomy and kinematics of the ankle, but especially in the pathological and degenerated ankles. The MB is a way to overcome this, and let the ankle find its best position by gliding and rotation of the meniscus. Has this been in vain? In a recent lecture, it was claimed in a prospective study with short-term follow-up that the FB of prosthesis originally introduced as a MB design gave the better results in terms of optimal

alignment, less radiolucent lines, and better patient satisfaction [5]. It is astonishing when comparing the same groups' former results with the MB design (survival rate at 5 years 95% [6]). Also it must be revealed how the optimal position of FB components is now feasible considering that the same alignment instruments were used. It remains to be proven for all the new FB total ankle designs that they are superior to - or at least equals - MB ankle replacements, so we do not end up with results like in the early 1970s.

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