

Editorial

“Percutaneous” And Mini-Invasive Is Not the Same

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EDITORIAL

Mini-invasive surgery (MIS) is a very actual and fashion concept in our century, everyday and always more often cited in the scientific literature, but about this now it's necessary to clarify some things to avoid heavy mistakes.

MIS is a definition which can be applied at the procedure that respect all principles of the traditional surgery but that produces a less invasive impact for the soft tissues: this is a general concept, recently with a great increasing in popularity that is always more pursued, in all the fields of the surgery.

In the orthopaedics, many examples of MIS are very popular, in all the anatomical districts: among the best know examples, the first experiences was proposed yet many years ago and became common practice with arthroscopic surgery in the knee, for both meniscus or ligamentous problems; after, the MIS arthroscopically assisted was implemented for the shoulder stabilization and for the rotator cuff reinsertions and finally also for the prostheses in the hip and knee, reducing in these cases the impact of the surgical access.

In the peripheral segments, particularly in the foot and ankle, about this argument in the last years it is created a misunderstanding that can produce problems. Classic example of this statement is the Achilles tendon repair, in whom in the mini-invasive like in the classical open surgery techniques the main attention is addressed to check the correct pairing of the tendon's stumps under visual control, while in the percutaneous techniques obviously this is not possible; that explains the more high percentage of tendon re-ruptures reported with the percutaneous techniques, maybe causing by a possible residual gap between the stumps in a part of the cases, favored by the lack of direct vision [1,2]. For these reason it's appropriate consider percutaneous repairs differently respect to the mini-open (MIS) techniques and not include them in this generic group, whit the aim of not influence the relative results.

An even more evident problem arises about the osteotomies for the correction surgery of the hallux valgus. In this field, MIS techniques were introduced many years ago by different Authors, such as Bosch [3], Kramer [4], Magnan [5] and Giannini [6]; in all cases this MIS techniques respect the classical principles for the corrective osteotomies: planned modify of the altered bone angulations and stabilization of the bone fragments for the maintenance of the achieved correction. Contrary to this, the

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recently introduced percutaneous surgery not pursues the same criteria, but it's based on a simply cut of the bone, without fix it, expecting a modification of his position by the action of the weight bearing, confiding in the natural healing for the bone consolidation and for the recover the foot functionality. Similar differences was seen in the correction of the lateral rays, where in the classical surgery it's indicate reduce all subluxations or dislocations of the joints, goal searched in both conventional and mini-invasive techniques and generally only for the symptomatic joints, while the percutaneous surgery has a different rationale and plans to cut the bone proximally and distally to the luxation, leaving dislocated the joint and at the same time treating all the rays, also those whit no symptoms.

For these reasons I think that is fundamental to retain separate the results of the percutaneous surgery techniques and them of the mini-invasive procedures, thing that does not happen at the moment in the literature, where generally results of the percutaneous techniques are described together, in the generic group of the MIS techniques [7]. Because the principles of the two groups of surgeries are different, to consider the casuistry together may affect the reliability of the results and consequently the consideration to reserve at the different techniques.

In particular, while for the true MIS techniques (Kramer, Bosch, PDO, SERI,...) are well described results and expected complications [8], for the new “percutaneous” techniques at the moment is evident a lack of large studies that can identify this data [7]; thus it's important to conduct other studies regarding these new techniques and carefully compare the related results not only with traditional surgery, while also with properly so called MIS techniques, to avoid any possible mistake and to know the real effectiveness of the percutaneous surgery.

In conclusion, all Authors should be sensitized to consider the results regarding the so-called percutaneous techniques in other groups respect to MIS surgery, as the two approaches are based on different assumptions; the same attention should be applied during the review works: it's necessary create and evaluate always distinct group for the percutaneous and MIS surgery if the principles are different, to avoid any possible mistake balancing the results.

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