Letter to the editor

Response to the letter by O. Barbier, D. Mainard


We warmly thank Dr Barbier and Dr Mainard for the interest and pertinence of their analysis.

The iliac plane (IP) does indeed raise many questions. In our preliminary study and in a clinical study, we performed (publication underway), we simply correlated the IP to the anterior pelvic plane (APP), which, although problematic dynamically, is presently the most widely studied reference plane.

The initial idea was to describe an alternative in lateral decubitus, navigating on the basis of IP bone landmarks, which are easier to locate in this position. Using preoperative EOS imaging, we demonstrated that palpating the IP enabled the position of the APP to be determined intraoperatively, making it possible to navigate in a classical manner in a well-known reference plane: the APP.

This navigation, however, is still APP-based, with the limitations pointed out by the authors in their letter. We are already using variant navigation techniques and did not wish, at first, to add further innovations.

The IP itself is an object of research in our team. It should be very possible to continue the analysis of this plane and define orientation parameters specific to the acetabulum and acetabular implants. Even so, it is, like the APP, subject to variations in pelvic dynamics and should ideally also receive a weighting, which remains to be determined.

There are finally 3 lines of research to pursue:

• the IP as an alternative to classic bone landmark palpation for navigation in lateral decubitus while keeping the APP as reference; this is the subject we have worked on;
• the IP as an alternative to the APP as reference for acetabular component positioning, with new specific definitions and angle measurements; we are working on this, and it radically changes the paradigm of Lewinnek’s plane and safe zone;
• the weighting to be applied to implant positioning in the APP (or IP) so as to take account of pelvic dynamics; EOS probably has an interesting role to play here.

Finally, to reply to the question “Could the authors specify whether they found a correlation between pre- and intraoperative IP orientation with respect to the APP on EOS?” these two planes are in principle mutually fixed, as both are part of the pelvis (taking the sacroiliac joints as fixed). Their orientation should thus be invariable, preoperatively and intraoperatively. It is this assumption that allows us to measure their preoperative relation and apply this intraoperatively for NAVEOS.

Disclosure of interest

The author has not supplied his declaration of competing interest.

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