

LETTER TO THE EDITOR**Concerns Regarding the Sufficiency of Isolated Buttress Plating in the Management of Posterior Wall Acetabular Fractures: Letter to the Editor****Dear Editor**

We read the recently published article in your journal with great interest (1). This study has compared the efficacy of isolated buttress plate fixation with the combination of intra-wall/lag screw and buttress plate in the surgical management of posterior wall acetabular fractures. The authors have highlighted the advantage of avoiding inadvertent intraarticular screw penetration and have also shown comparable outcomes with the use of isolated buttress plate.

As the reader, we would like to put forward some concerns based on the study analysis.

1. Like any intra-articular fractures, posterior wall acetabulum fractures are fixed based on the principles of absolute stability with stabilization of wall fragment with one or two lag screws and additional buttress plate to withstand deforming forces especially during hip flexion and internal rotation (2). Biomechanical studies have shown a combination of buttress plate and interfragmentary screw fixation for posterior wall fracture to be more stable with higher load to failure as compared to buttress plate alone or screw alone fixations (3).

2. In this study, we would like to know regarding post-operative rehabilitation protocol followed for patients treated with isolated buttress plate, as we believe early weight-bearing in this group of patients might have chances of posterior wall fragment loosening and displacement with the only support of isolated buttress plate without any lag screw. Also, we would like to know regarding the preferred position of isolated buttress plate used in their patients, as studies demonstrating posterior wall rim plate to be more stable and stiffer as compared to conventional positions of buttress plate (4).

3. In this study, authors have reviewed 101 patients with posterior wall acetabulum fracture –AO/OTA 62A.1. Of these patients, 29 were treated with ‘wall screw + buttress plate’ combination, and 72 were treated without wall screw. Also, among the same 101 patients, 54 were fixed with a single buttress plate, 39 with double buttress plate, and 8 with spring+ buttress plate combination.

However, the authors haven't mentioned the distribution of patients treated with ‘wall screw+ buttress plate’ (29 patients) among the single buttress, double buttress, and spring+ buttress plate subgroups. Authors have described the use of a double buttress plate for the large fragments to avoid teetering effect and spring+ buttress plate combination for small marginal wall fractures. Therefore, it is unlikely to have wall screws used in these two subgroups of fixation (39+8 patients). This leaves the single buttress plate subgroup (54 patients) to include the patients treated with ‘wall screw+ buttress plate’ and patients with ‘isolated buttress plate’. This gives us the number of patients treated with an isolated buttress plate to be 25 (54-29= 25). Hence, in this study, ideally, the comparison should have been done between patients treated with isolated buttress plate (25) and patients treated with wall screw+ buttress plate (29).

4. In the patients with relatively large posterior wall fragment with fracture extending cranially, the authors have used screw through the wall fragment in the number two hole of recon plate. But the inclusion of this group of patients to either isolated buttress plate or fixation with wall screw+ buttress plate group wasn't clarified.

5. In the description doesn't match with the illustrations. Also, the description of figure 3D is missing. This figure shows the use of a 6 hole recon plate but the description is for 8 hole plate.

We appreciate the authors for providing a stimulating research and hope that these points shall also be clarified.

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References

1. Firoozabadi R, Chen EY, Elhaddad M, Tornetta III P. Isolated Buttress Plating of Posterior Wall Acetabular Fractures: Is it Sufficient? Archives of Bone and Joint Surgery. 2020; 8(4):511.
2. Moed BR, WillsonCarr SE, Watson JT. Results of operative treatment of fractures of the posterior wall of the acetabulum. JBJS. 2002; 84(5):752-8.
3. Wu X. A biomechanical comparison of different fixation techniques for fractures of the acetabular posterior wall. International orthopaedics. 2018; 42(3):673-9.
4. Pease F, Ward AJ, Stevenson AJ, Cunningham JL, Sabri O, Acharya M, et al. Posterior wall acetabular fracture fixation: A mechanical analysis of fixation methods. Journal of Orthopaedic Surgery. 2019; 27(3):2309499019859838.