

Possibility of one single incision in acetabular fracture surgery

Virtual fracture reconstruction and surgical planning

Working manuscript - publication status unverified

The reviewed project archive shows involvement of Mr Peyman Bakhshayesh; the final author list requires confirmation.

Virtual feasibility does not establish surgical safety, quality of reduction or patient outcomes. These findings do not endorse one exposure for every acetabular fracture. Publication and the final author list remain unverified.

Research question

Can selected acetabular fracture patterns be reduced and fixed through a single surgical exposure in a virtual planning model?

Purpose and approach

Acetabular fracture geometry affects access for reduction and implant placement. A computational model can explore potential exposures and screw trajectories before clinical evaluation.

The source constructs virtual fractures from CT-based pelvic anatomy, simulates reduction and fixation, and considers trajectories that avoid the hip joint. It is a modelling study rather than a comparison of operated patients.

Work needed before a complete paper

- Confirm the current author list, final manuscript and submission history.
- Verify fracture classification, model assumptions and reproducibility of virtual measurements.
- Confirm permissions and removal of identifying information from any source images.
- Describe the limitations of modelling and identify what clinical validation would be required.

Status note: A virtual fracture-planning manuscript is available. A matching journal publication has not been verified.