received chemical thromboprophylaxis. At the final follow up the incidence of OA and AVN was evaluated with plain radiographs (three views) and functional outcome was assessed using the Merle d'Aubigne Score. The mean follow up was 34.7 months (24–51).

**Results:** The most common fracture pattern was posterior/superior wall in 19 cases (65.51%). Marginal impaction of the acetabulum was present in nine cases. Bone graft was necessary in seven cases. In six patients, a GAP was present on the post op CT (ranging from 3 mm × 3 mm to 3 mm × 18 mm). The number of 2 mm mini screws inserted ranged from 1–4.

The incidence of radiological osteoarthritis was 1/29 (3.44%) and AVN 1/29 (3.44%). Both patients underwent hip replacement at a mean time of 18 months. There were two (7.4%) cases of joint space narrowing. HO was present in 11 patients but with no functional significance. There was no deep or superficial infection in this series of patients. CT scanning at 3 months post-operative revealed no loss of the original reduction achieved using the 1.5 mm/2 mm mini screws. Merle d'Aubigne Score was excellent in 23 cases and good in 6.

**Conclusion and significance:** Stabilisation of comminuted posterior wall acetabular fractures using the two level reconstruction technique with either 1.5 mm or 2 mm mini screws appears to provide stable fixation of the fragments and is associated with favourable results in terms of incidence of osteoarthritis and functional outcome as seen in this series of patients.

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**Does timing of acetabular fracture fixation influence the final functional outcome for these patients?**

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Open reduction and internal fixation of displaced acetabular fractures is now accepted as the standard of care.

Ideally these fractures should be fixed at 5–7 days after injury and are more difficult to fix after 2–3 weeks.

All operative treatment of acetabular fractures was performed in a tertiary centre and during most of this trial was undertaken by one surgeon (though this has increased to two in the last year).

Between January 2002 and January 2004, 40 consecutive patients with displaced acetabular fractures were operated on.

Data covered included surgical delay, mechanism of injury, associated injuries, co morbid factors, fracture type, congruency and postoperative complications and other risk factors were also recorded. Risk factors included dislocation, comminution, marginal impaction and femoral head injury.

At follow up all patients had Harris Hip Scores and general satisfaction questionnaires completed.

The results of the study showed that the target timing of 5–7 days was very difficult to achieve and in spite of other variables delay of more than 2–3 weeks was associated with poorer functional outcome.

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**The treatment of bone defects of the tibia by bone transport using a stacked Taylor Spatial Frame**

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**Introduction:** We have treated 17 patients with bone defects of the tibia by internal bone transport using a stacked Taylor Spatial Frame. The Taylor Spatial Frame computer software package was used to calculate strut length adjustments to mediate bone transport and maintain bone alignment.

**Patients:** There were 12 cases of infected non unions, 2 cases of osteomyelitis, 1 case of acute traumatic bone loss, 1 case of non union in a patient with neurofibromatosis, and 1 case of pseudoarthrosis of the tibia.

**Results:** The mean bone defect was 51.8 mm (range 10–100 mm).

During transport, there were 31 episodes between the 17 patients of bone malalignment requiring frame adjustments to be calculated (mean 1.82 per patient).

Eleven patients required adjustment for malalignment upon docking.

To date, there have been 12 surgical interventions at the docking site in 8 patients to promote union.

Seven drilling procedures, four cases of open debridement, one of which was bone grafted and one exploration of the docking site for soft tissue interposition.

Residual deformity at the docking site or regenerate was negligible in 4 patients and less than 5 degrees in any plane in the remaining 13 patients.

**Conclusion:** The use of a stacked Taylor Spatial Frame system is effective in mediating bone trans-