

Calvarial remodelling for sagittal synostosis: does fibrin glue (Tisseel) reduce post-operative blood transfusion requirements?.

Authors: White N, Carver ED, Rodrigues D, Dover S, Magdum S, Nishikawa H, Solanki G

Publication Date: 2009

Abstract:

INTRODUCTION: Calvarial remodelling for sagittal synostosis is extensive surgery and is associated with potential risks; the most significant of these is blood loss.

MATERIALS AND METHODS: We studied 16 patients undergoing calvarial remodelling by the same surgical team over a 12-month period to determine whether scalp closure with fibrin glue (Tisseel) could decrease post-operative bleeding and the need for blood transfusion. In the last 5 months of the period studied, fibrin glue (Tisseel) was used and six out of the 16 patients had their wound closure assisted by this means. Data was prospectively collected on age at surgery, the estimated peri-operative blood loss, the volume of blood transfused intra-operatively, the volume drained in the first 8 h post-operatively, the total post-operative drainage and the volume of any post-operative blood transfusion required.

RESULTS AND DISCUSSION: The two groups were comparable with a similar mean age at surgery, estimated peri-operative blood loss and intra-operative blood transfusion requirements. The volume drained in the first 8 h post-operatively was 172 ml in the treated group compared to 246 ml in the untreated group ($p < 0.02$) and the total post-operative drain volume was 301 ml compared to 441 ml ($p < 0.01$). None out of the six patients treated with fibrin glue required post-operative transfusion compared to two out of ten in the untreated group. The use of fibrin glue has enabled us to reduce post-operative bleeding and the need for post-operative blood transfusion.