



## AB155. Is routine haemoglobin monitoring following elective hip and knee arthroplasty still necessary?

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**Background:** Haemoglobin (Hb) levels are measured in the early postoperative phase following primary joint arthroplasty to identify patients with postoperative anemia requiring transfusion. With the refinement of surgical techniques, overall blood loss in primary arthroplasty has decreased. We aim to investigate the blood monitoring and transfusion practices in our own institution.

**Methods:** We conducted a retrospective review of all patients who underwent elective total hip or knee arthroplasty in Galway University hospital between March 1st and June 1st 2019. We recorded when they underwent postoperative haemoglobin testing, whether or not they had a drop of haemoglobin which would indicate transfusion (<8 g/dL) and whether or not they were transfused. In patients who underwent transfusion, a chart review was performed

to establish the presence of factors which would have triggered repeat Hb testing.

**Results:** In total 136 patients underwent elective primary hip or knee arthroplasty in the three month period. All 136 had a full blood count sent as standard on the first postoperative day. None (0%) had a clinically significant postoperative haemoglobin drop on day 1. Eighteen (13.2%) patients had repeat haemoglobin testing on day two or subsequently. Of these, 8 (5.9%) exhibited a drop in haemoglobin to less than 8 g/dL with a mean Hb drop of 4.26 (SEM  $\pm 0.862$  SD  $\pm 0.98$ ) and pre transfusion Hb of 7.74 (SEM  $\pm 0.182$ , SD  $\pm 0.21$ ), 5 (3.7%) proceeded to undergo allogenic blood product transfusion. All five had documented indications for repeat haemoglobin testing and transfusion.

**Conclusions:** Based on our findings, there is no evidence for performing routine haemoglobin testing on day one post elective hip or knee arthroplasty. It is our recommendation that postoperative Hb testing should only be carried out on patients with additional indications.

**Keywords:** Arthroplasty haemoglobin primary postoperative routine; laboratory; monitoring

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