Measurement of Routine Post-operative C-Reactive Protein in Elective Total Knee Replacement Patients Following Simple Education of its Utility

**Background**

- C-Reactive Protein (CRP) is an acute phase protein peaking at 48h to 72h post-operatively.
- During this time CRP is a poor indicator of whether a patient has developed a post-operative infection.
- This audit aimed to assess the practice of requesting CRP measurements in patients undergoing an elective Total Knee Replacement (TKR) and facilitate change in clinical practice.

**Methods**

- Data was collected retrospectively for elective TKR patients whose length of stay was ≥5 days during January 2011 to May 2011.
- The audit included all elective TKR patients who had post-operative bloods.
- Patients whose stay was complicated by ITU admission were excluded from the audit.
- Junior doctors were then educated, via presentations, Trust email and departmental flyers, on the utilisation of CRP in post-operative patients.
- A re-audit was carried out during December 2011 and March 2012.

**Results**

- The audit revealed a lack of insight by junior doctors into the utility of CRP in post-operative patients.
- Through simple educational methods, a significant reduction in the number of CRPs requested was achieved in this patient group.
- Our secondary outcome revealed some patients had a D-Dimer and ESR test in the immediate post-operative period, both of which are also raised in response to surgery and are non-specific in supporting a diagnosis of a specific inflammatory process.
- Although the aim of the audit was to specifically look at post-op CRPs, the audit also encouraged the need to use tests only when clinically indicated.

**Discussion**

- Post-operative CRP should not be routinely requested for uncomplicated elective TKR.
- This can be extended for all elective surgical procedures.
- To create a dynamic self-perpetuation induction system to ensure contemporaneous management of patients.

**Recommendations**

- Post-operative CRP should not be routinely requested for uncomplicated elective TKR.
- This can be extended for all elective surgical procedures.
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**SELECTED REFERENCES**