Clinical value of elective post operative radiographs in total knee arthroplasty

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Abstract

Background

Post operative radiographs following total knee arthroplasty are requested as part of routine follow up in some institutions. There is an interest to see whether there is clinical value in performing these radiographs. The purpose of this study was to assess the significance of elective post operative radiographs in patients who underwent total knee arthroplasty.

Method

All patients who underwent total knee arthroplasty at a district general hospital from 2019 to 2020 were included. Data was collected retrospectively from medical records and radiograph requests. Alterations to clinical management based on radiographic findings were reviewed.

Results

This study looked at 116 patients who underwent total knee arthroplasty and 28 (24%) were excluded due to having no clinic follow up. Of the 88 (76%) patients included, 31 (35%) had their post operative elective radiograph, while 43 (49%) patients had none. There were no abnormalities detected from the elective radiographs and none of the patients returned to the theatre. The remaining 14 (16%) presented with new symptoms and had non-elective radiographs. 8 out of 14 patients who had non-elective radiographs did not have any intervention, while the remaining 6 returned to theatre.

Discussion

The value of not performing these radiographs saves time, cost, and prevents unnecessary radiation exposure. In our institution, a 2-view knee radiograph costs £29 and takes roughly 15 minutes. This does not include indirect costs of additional clinic time and patient waiting time. In the larger context, the cost associated with elective radiographs is significant. However, performing post operative radiographs remains beneficial for patients who have clinical indication.

Conclusion

Elective post operative knee radiographs did not detect any true abnormalities. Information from elective radiographs has no clinical significance and did not change management. Therefore, this study recommends that there is no rationale requesting elective post operative knee radiographs.