Clinical and scientific letters

Patient power – Kidd Gloves

In a spirit of patient participation, we listened to the anxieties of a patient (G Kidd) undergoing chemotherapy who had a (reasonable) fear of cross-infection while neutropaenic. In particular, she expressed anxiety about having her observations recorded by means of a pulse oximeter placed on her finger, which had previously been used to measure saturations in other patients.

We wondered whether the oximeter measurements would be altered if the patient wore a transparent disposable plastic glove or even just the finger of such a glove while the observations were made. Colleagues were sceptical about the accuracy of measuring through a glove, albeit transparent.

We also wondered whether there was any evidence that the patient's anxieties about cross-contamination were justified.

Methods

Oxygen saturations were measured using the Fukuda DS-7100 dynascope, old Woking-standard ward pulse oximeter in 50 patients with saturations ranging from 94% to 100% with a mean value of 97%. The saturations were measured two times: initially as per standard practice, and then while the patient was wearing a transparent inexpensive glove.

Additionally, the oximeter was swabbed on 10 separate occasions looking for residual organic matter, which could reflect contamination, using the standard Getinge protein test for flexible endoscope 2.5M, Getinge group Cambridge. Contamination with protein matter was demonstrated by colour change from clear to blue.

Results

There was in fact, no demonstrable difference in oxygen saturations with or without the glove (see Fig 1). A paired student t-test showed a two-tailed p-value of 0.105, showing no statistical significance between readings overall (95% CI -0.04–0.44). Similarly a Wilcoxon signed-rank test showed no statistically significant difference in saturation readings, with a p-value of 1.985.

Additionally, there was in fact evidence of residual organic matter on the pulse oximeter between different patients. Ten machines were tested, with eight showing absolute colour change and two demonstrating a minimal colour change on protein kit.

Conclusions

There was indeed evidence of residual organic material on the pulse oximeter between patients suggesting that anxiety about

Fig 1. Graph comparing saturations with and without a glove.

OLR = ordinary linear regression

cross-infection was justified, additionally there was no difference in the measured saturation when using an inexpensive transparent disposable plastic glove. Using a glove reassured the patient. A happy patient is a joy; we call this technique the Kidd Glove in her honour. ■

Consent

Written consent was obtained from the patient to publish their name and the clinical details in this article.

Author contributions

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