

Insulin Pump Therapy in the Perioperative Period: A Review of Care after Implementation of Institutional Guidelines

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Abstract

Background:

An institutional policy was previously established for patients with diabetes on insulin pump therapy undergoing elective surgical procedures.

Method:

Electronic medical records were reviewed to assess documentation of insulin pump status and glucose monitoring during preoperative, intraoperative, and postanesthesia care unit (PACU) phases of care.

Results:

Twenty patients with insulin pumps underwent 23 procedures from March 1 to December 31, 2011. Mean (standard deviation) age was 58 (13) years, mean diabetes duration was 28 (17) years, and mean duration of insulin pump therapy was 7 (6) years. Nearly all cases (86%) during the preoperative phase had the presence of the device documented—an improvement over the 64% noted in data collected before the policy. Intraoperatively, 13 cases (61%) had the presence of the pump documented, which was higher than the 28% before implementation of the policy. However, documentation of pump status was found in only 38% in the PACU and was actually less than the 60% documented previously. Over 90% of cases had glucose checked in the preoperative area and the PACU, and only 60% had it checked intraoperatively, which was nearly identical to the percentages seen before policy implementation. No adverse events occurred when insulin pump therapy was continued.

Conclusions:

Although some processes still require improvement, preliminary data suggest that the policy for perioperative management of insulin pumps has provided useful structure for care of these cases. The data thus far indicate that insulin pump therapy can be continued safely during the perioperative period.

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Abbreviations: (CSII) continuous subcutaneous insulin infusion, (PACU) postanesthesia care unit

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