

Enhancing safety in invasive cardiology procedures through checklist implementation: a 6-month follow up

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KEYWORDS: invasive cardiology procedures, safety checklists, patient safety, implementation.

CITATION: *Cardiol Croat.* 2024;19(1-2):24. | <https://doi.org/10.15836/ccar2024.24>

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Introduction: Invasive cardiology procedures, including cardiac catheterizations and percutaneous interventions, play a pivotal role in diagnosing and treating cardiovascular diseases. However, these procedures are not without risks. To mitigate potential complications and ensure patient safety, the implementation of safety checklists has gained prominence.^{1,2}

Patients and Methods: By conducting a comprehensive review of the existing cath lab checklists and consulting relevant literature, we have developed an enhanced checklist specifically tailored for key invasive procedures, including diagnostic angiography, coronary and heart/structural interventions, pacing, and invasive electrophysiology. Following the initial training phase, the checklist was introduced into practice in December 2022, and its implementation was meticulously monitored for the subsequent two months, extending through February 2023, representing the initial phase (Phase 1) involving 486 patients. This monitoring process was sustained for an additional 6 months (Phase 2), allowing for a comparative analysis of the collected data over time.

Results: Over the 6-month period, a total of 1,835 patients underwent invasive cardiac procedures, and among them, 573 (31%) were randomly selected for checklist analysis. In the monitored patient group (average age 66 (61-76); 358 males, 209 females, 2 unknown), checklist compliance percentages were compared between Phase 1 and Phase 2 as follows: a) pre-procedural 75.9% vs 85.0% (Phase 1 vs Phase 2); b) periprocedural 73.4% vs 80.9%, and c) postprocedural 79.2% vs 89.2%. The lowest compliance rate was observed during the measurement of respirations and saturation in Phase 1 (27.0%), which improved significantly in Phase 2 to 64.7%. Compliance with recording the exact time of puncture site management also increased from 28.4% in Phase 1 to 50.6% in Phase 2.

Conclusion: The results of this study indicate a clear improvement in checklist completion and data accuracy due to the conducted education and nurses' growing experience with safety checklists. However, there remains a need for ongoing education and raising awareness about the crucial importance of using checklists. Future efforts should continue to be directed towards these areas to further enhance patient safety and procedural quality.

RECEIVED:
September 28, 2023

ACCEPTED:
October 7, 2023



LITERATURE

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