Abstract: P1659

Evolution of level of evidence c recommendations in european society of cardiology clinical practice guidelines on heart failure

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Topic(s):
Chronic Heart Failure – Treatment

Citation:

Background:
Over the past two decades, the European Society of Cardiology (ESC) Clinical Practice Guidelines (CPG) on Heart Failure has increasingly become a familiar part of Cardiology practice and are used worldwide. By creating objective standards, CPG provides a mechanism to assess decision-making and straightforward references for clinicians. Level of Evidence C recommendations are based on expert consensus and/or small retrospective studies and registries with limited and non-representative populations evaluated. The resulting directives need to be proven with better quality data to assess its true benefits.

Purpose:
The purpose of our study was to describe and evaluate the evolution of Level of Evidence C recommendations of ESC CPG on Heart Failure and to provide a quality assessment of its benefits in the following years.

Methods:
In this retrospective observational Case-Control study, we identified and collected all Level of Evidence C recommendations in five consecutive published documents of ESC CPG in the years 2001, 2005, 2008, 2012 and 2016. Each identified recommendation was classified between two major groups: Diagnostic and Complementary Exams (group 1) and Therapeutics and Interventions (group 2) and was followed up in the following documents. Primary outcomes were classified as: (1) Upgrade to Level of Evidence A or B [Upgrade], (2) Elimination or disproven benefit/harm [Downgrade] and (3) Maintenance or minor reformulation with unchanged benefit/harm [Maintenance]. We applied a Kaplan-Meyer survival analysis to estimate the probability of Upgrade or Downgrade in each group.

Results:
A total of 239 different Level of Evidence C recommendations were submitted to the final analysis, 22.6% (n=54) in group 1 and 77.4% (n=185) in group 2. On follow-up, 35.2% (n=76) of recommendations were upgraded, 29.6% (n=64) were downgraded and 35.2% (n=76) were maintained. Regarding outcomes, the downgrade of recommendations occurred predominantly in group 2 (94.4%). Considering all the eliminated recommendations, 60.9% took place on the next following published ESC CPG document. Likewise, 60.5% of upgraded recommendations also occurred on the next following published ESC CPG document. The probability of upgrade or downgrade in the next following document was 52.8%, predominantly in the Therapeutics and Interventions group (37.5% vs 57.9%, p=0.012).

Conclusions:
Level of Evidence C recommendations constitutes an important asset of ESC CPG on Heart Failure as they are usually updated on new treatment options and are developed by experts in the specific topic. However, the probability of elimination due to disproven benefit or potential harm was high (29.6%), particularly regarding therapeutics and interventions (94%). Since a significant fraction of Level of Evidence C recommendations remains unchanged on the following document (35%), the need for high-quality data, specifically regarding therapeutic interventions, is warranted.
Evolution of Level of Evidence C recommendations in ESC-CPG on HF

- In 2001, 56 recommendations were submitted, with 4 upgraded, 12 downgraded, and 1 maintained.
- In 2005, 24 recommendations were submitted, with 2 upgraded, 7 downgraded, and 3 maintained.
- In 2008, 92 recommendations were submitted, with 16 upgraded, 45 downgraded, and 7 maintained.
- In 2012, 44 recommendations were submitted, with 17 upgraded, 20 downgraded, and 7 maintained.

- The probability of upgrade or downgrade in the next following document was 52.8%, predominantly in the Therapeutics and Interventions group (37.5% vs 57.9%, p=0.012).

Conclusions:
Level of Evidence C recommendations constitute an important asset of ESC-CPG on Heart Failure as they are usually updated on new treatment options and are developed by experts in the specific topic. However, the probability of elimination due to disproven benefit or potential harm was high (29.6%), particularly regarding therapeutics and interventions (94%). Since a significant fraction of Level of Evidence C recommendations remains unchanged on the following document (35%), the need for high-quality data, specifically regarding therapeutic interventions, is warranted.