

Chemotherapy-Induced Nausea and Vomiting (CINV): the Achilles' Heel of Oncologists

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Introduction

The incidence of chemotherapy-induced nausea and vomiting (CINV) has been decreasing [1,2] through improvements of antiemetic drugs and refinements of antiemetic guidelines. However, CINV still occurs in approximately half of patients receiving cancer chemotherapy [3].

The presence of chemotherapy side effects influence patients' adherence to treatment and adversely impacts both quality of life and the ability to carry out the activities of daily living. In addition, patients who experience CINV may develop anticipatory nausea and vomiting in later cycles [4].

As a result, CINV is one of the major reasons for disruption or delay in treatment, which is often due to patient noncompliance [5]. Moreover, patients with emesis may require emergency care or hospitalization, adding to the economic burden of cancer care and increasing the use of health care resources.

The administration of a safe and efficacious prophylactic antiemetic regimen is thus important for current and future patients at risk for CINV [6].

Surprisingly, despite the availability of regularly updated guidelines, several reports highlighted the poor adherence of oncologists to them [3, 7-12]. In addition, there is often a discrepancy between symptoms assessed by healthcare professionals and those really experienced by patients [13,14] and between trial setting and daily clinical practice.

It is likely a combination of factors are responsible for this imbalance, including health care staff underestimating the incidence of CINV [13], suboptimal adherence to antiemetic guidelines [3,12], lack of an optimal antiemetic regimen [15], clinical trials overestimating the benefit of antiemetics [16], and, quite simply, current trial endpoints that do not fully reflect patient experience.

The increasing interest of improving patients outcome in terms of survival and response, seems to underlie the lack of attention to the anti-emetic prophylaxis. Many clinicians maybe believe that CINV constitutes a "minimal" price to pay for survival gain. On the other hand, patients frequently do not discuss chemotherapy-related side effects, since they may believe that these effects are an expected part of the treatment. As a results, CINV continues to impact patient's daily life. Patient-Reported Outcome Measures (PROMs) have been introduced to improve the quality of healthcare by improving patient-clinician communication [17,18].

Despite great effort in, many critical issues remain to be solved in the context of CINV. First of all we need a standard method for

recording symptoms, which is most important for treatment in clinical settings.

In many clinical studies, the efficacy of antiemetic therapy has been evaluated using a patient daily diary [19,20], which are seldom used in clinical settings.

In outpatients receiving chemotherapy in particular, physicians often assess symptoms during consultations alone, generating a gap between symptoms reported by healthcare professionals and those really experienced by patients, and thus precluding appropriate treatment.

However, because awareness of the occurrence of CINV depends only on patient declarations, it is difficult to know the severity of the CINV without patient-reported outcomes.

We must also point out some pitfalls in standard preventive guidelines, which are based primarily on the emetogenicity of single agents. First, the variation in ematogenic profiles due to combination regimens is not considered. Second, there are also too many individual parameters, including exposure to chemotherapy, alcohol use, age, and gender [21,22], individual sensitivities to the preventive agents, tumor status, and the physical condition of patient, which influence CINV incidence.

Thus, refining the antiemetic measures is also necessary. The establishment of the personalized precautions as well as the standard one appears an unmet clinical need.

Conclusion

In conclusion, there has been a significant improvement in CINV over past decades, however, we still have much to do. Nausea and vomiting is a distressing complication associated with the administration of chemotherapy that may require personalized plans for prevention. However, this not means that we should accept a random approach not based on scientific data to prescribing antiemetics. Enhanced education on antiemetic guideline recommendations is desperately needed to improve the patient experience after chemotherapy.

This brief commentary wants to be provocative and arise greater interest of CINV and its consequences.

Increased knowledge on biological mechanism of CINV and the availability of newer anti emetic drugs will not result in clinical advantage unless Oncologists understand the impact of this topic.

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