



SEVERITY OF MEDICATION ERRORS IN ONCOLOGY.

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BACKGROUND AND AIM

❖ Antineoplastic medication errors (ME) represent a high iatrogenic potential that accounts for 21 % of fatal adverse events and 23% of permanent disabilities. Antineoplastic related ME prevention has become a priority in hospitals ⁽¹⁾.

❖ The aim of this study is to measure efficiency of multidisciplinary health care team (MHCT) in detection of oncology medication errors (ME) using the number and the severity values of the ME intercepted (do not reach patients) compared with ME that reach patients .

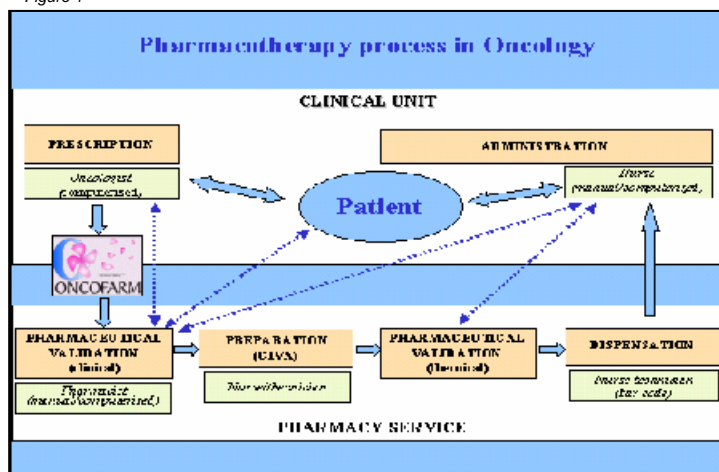
METHODS

❖ Prospective study (January-December 2003) that includes 663 adults patients with chemotherapy, equivalent to 6908 patient-day. The prescription is computerized (Oncofarm™) and preparation of mixtures is centralized.

❖ The ME are identified by the MHCT: physicians, pharmacists and nurses during the prescription, preparation, dispensation and follow-up outcomes of patients (Figure 1).

❖ Data collected: number (normalized to 1000 patient-day) and severity value (table 1) of the ME intercepted and prevented (do not reach patients) compared to ME that reach patient. Odds Ratio (OR) was calculated to compared results.

Figure 1



RESULTS:

❖ A total of 178 ME equivalent to 25.7 ME/1000 patient-day (95%CI 22.2-29.8) were identified. Of these, 19.8 ME/1000 patient-day (77%) were intercepted with a mean severity value of 3.4 (95% CI:3.2-3.5) versus 5.9 ME/1000 patient-day (23.0%) that reached patients with a mean severity value of 1.7 (95% CI:1.4-2.1).

❖ The number of ME intercepted was 3.4 times greater than ME that reached patients [OR=3.4, (95% CI:2.4-4.8, p<0.0001)]

❖ The severity value of ME intercepted was 2.5 times greater than ME that reached patients [OR=2.5, (95% CI:1.9-3.3, p<0.0001)].

❖ ME with clinical significance (severity value>3) accounted for 9.6 ME/1000 patient-day (37.7%). Of these, 9.4 ME/1000 patient-day (97.9%) were intercepted versus 0.2 ME/1000 patient-day (2.1%) that reached patients. That means that for each ME with clinical significance that reached patients 33 ME were intercepted [OR=32.8, (95% CI:8.0-134.0, p<0.000001)].

Table 1

Grade/ description of severity ME ⁽²⁾	N° ME/1000 patient-day (% ME)	
	Intercepted	Reach patients
1/ ME without harm and without change treatment	1.6 (6.1)	4.1 (15.7)
2/ Change in treatment without change in vital signs	1.0 (4.0)	0
3/ Increasing monitoring without change in vital signs	7.8 (30.3)	1.6 (6.1)
4/ Change in vital signs or additional procedures required	7.2 (28.1)	0.1 (0.6)
5/ Increased hospital length stay with additional treatment	2.2 (8.4)	0.1 (0.6)
Total	19.8 (77.0)	5.9 (23.0)

CONCLUSION

❖ The multidisciplinary health care team method of detection ME in oncology patients is able to intercept 33 ME for each ME with clinical significance that reach patients. However, the 2.1% of these ME that reach patients confirms the need to continue improving our errors detection system.

REFERENCES

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- (2) Schneider PJ et al. Cost of medication-related problems at a university hospital. Am-J-Health-Syst-Pharm 1995;52:2415-8