Reviewer's report

Title: Nosocomial infections in pediatric cancer patients: results of a prospective surveillance study from 7 University hospitals in Germany and Switzerland

Version: 1 Date: 17 December 2007

Reviewer: elio castagnola

Reviewer's report:

the paper analyzes the incidence of hospital infections in children in cancer.

major compulsory reviews

in my opinion the major problem resides in the fact that in such patients the concept of hospital infection in questionable. in fact since it is defined as "occurring after 48 hrs from admission (and not incubating at that time) nad 30 days after discharge" it is difficult to not consider all the infections as nosocomial infections in patients that go in and out of the hospital for many reasons.

however the issue of evaluating the rate of infections by the days of hospitalization may represent another point of view after those that have been used as the whole period of immunosuppression (Eur J Cancer. 2001 Dec;37(18):2413-9.; Eur J Cancer. 2005 Jul;41(10):1439-45, Pediatr Blood Cancer. 2007 Oct 15;49(5):672-7.; Bone Marrow Transplant. 2007 Nov 19; [Epub ahead of print] ) and neutropenia (Clin Infect Dis. 2007 Nov 15;45(10):1296-304.). Therefore I would change the whole study in "Health Care Associated Infections".

Othe comments

1. the bibliography is quite old and need the evaluations of new studies (some of them suggested above)
2. in the methods authors refer to anti-biotics that should indicated
3. the definition of CVC-related bsi should not be limited to the absence of other documentations. there are now many systems for defining this infection that should be used (in fact the rate of CVC-related BSI is very (too much) high)).
4. the report of the results should be changed: a) basic data including CVC utilization, b) infections (documented vs fuo), c) presence of neutropenia at the event; d) etiology and resistances

Moreover, it is difficult for me to understand the definition of blood stream infection (BSI?) with negative blood cultures (table 3). I would prefer the definition of systemic inflammatory response syndrome (SIRS) that has been described also in neutropenic patients. Moreover, the definition of surgical site infection (SSI) is different from that normally accepted (30 days after or up to 2 years in presence of prostatic devices). The data of changes in process of times are useless since the observation is not uniform. Similarly are useless the figures.

Finally the data are frequently reported in a confuse form that it is difficult to
understand and follow.
The discussion is a consequence of the data report and it seems a "propaganda" for the web system created by the authors more than a real discussion of the results.
In conclusion the data are interesting, especially those reported in table 3, but the paper needs to be completely re-written.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

no competing interest