Reviewer’s report

Title: Atrazine Induced Apoptosis of Splenocytes in BALB/C Mice

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Reviewer: M. Firoze Khan

Reviewer’s report:

This study is focused on evaluating immunotoxic potential of atrazine (ATR), especially its impact on apoptosis of splenocytes. BALB/C mice were orally exposed to 100, 200 and 400 mg/kg doses of ATR for 21 days. Study confirms some of the earlier findings on immunotoxic responses of ATR and also provides some useful data on induction of apoptosis in splenocytes. While there is definitely a need to evaluate immunotoxicity of ATR, their overall approach has some major problems and manuscript is poorly prepared, especially the methods and discussion sections need to be re-written.

Some major comments for authors:

Preparation of ATR stock solution needs a better description.

Authors mention that “after acclimatization for one week, the mice were housed in standard polyethylene cages”. It is not clear how were they housed before acclimatization.

A clear rationale for dose selection and duration of exposure needs to be provided. How are these doses relevant to human exposure? Are humans exposed to such high doses for 21 days?

Authors repeatedly mention their findings as dose-dependent response. What was the criteria for describing them as dose-dependent? This is important because generally no changes were seen at 100 mg/kg dose.

Table 1 shows changes in the spleen weight of mice exposed to ATR. They show spleen weight of controls as 0.92 g. This kind of weight is generally observed in rats. Authors need to provide an explanation for spleen weights.

Figure legends for Figures 3 and 4 lack any description and must be clearly presented.

Figure quality of all figures needs improvement.

The entire manuscript should be thoroughly edited for grammatical errors.

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests:

I have no competing interests.