

Analysis of acute poisoning cases at a tertiary care hospital

"Pesticide regulation is an under-used but highly effective strategy to prevent #suicide. The high toxicity of many pesticides leads to death, particularly in situations where there is no antidote or where there are no medical facilities nearby." – World Health Organization, Sep 10, 2019.^[1]

Dear Editor,

Aggarwal *et al.*^[2] made a study of the pattern and outcome of acute poisoning cases at (a) tertiary care hospital in north India in their original article published in the Journal, September 2023 issue. In the study, the investigators went through records of more than 400 patients, sifted the case sheets, compiled the data in the form of many tables, and presented their observations in an easy-to-understand manner. The study provides an insight into the multi-factorial complexities, and challenges intertwined therein and profiles the patients getting admitted at the teaching hospital. I am grateful to the authors for observing due diligence while preparing the results and then explaining behind-the-scenes demography.

Nevertheless, while going through the Results, I had certain reservations too which I want to share with them. They found that close to three-fifths (60%) patients of the clinical cases were males and the rest were females. Hence, *more* number of males indicate (possibly) a high degree of stress on academic, financial, and emotional fronts to achieve targets. But the fact of the matter is that nowadays both genders are of the race in academics. Gross enrolment data for both genders, as per statistics provided by the Government of India, indicate that as many girls are in schools in our era as boys.^[3] Both genders have aspirations for a brighter future and have been making efforts to reach the sky in our times. While recounting these facts, it is difficult to surmise that males are under *more* academic stress than females in our society.

Contrarily, we need to realise the possibility of selection bias in the observational study.^[4] Subjects in the study do not represent the general population but are carved out from that cohort who succeeded in reaching the tertiary care hospital. Nowadays, public ambulance services ferry patients from their homes to hospitals.^[5] As males are more likely to get attention from close family-members and immediate neighbourhood during crisis times in a patriarchal society, they get overrepresented in the indoor lot.^[6] A few years ago when the (then) Director of AIIMS, New Delhi, calculated the total number of patients attending its OPD and

then estimated sex ratio, they found more males than females.^[7] Males have invisible advantages in our society^[8] which they leverage when they get ill and that undercurrent may distort our findings.

Another observation of the authors is that poison consumption is more prevalent in rural populations. The inequality is found to be in the 80:20 ratio. One of the reasons for the observation may be that tertiary care teaching hospitals get complicated cases from remote and rural areas. As those areas usually do not have well-functioning hospitals^[9] providing round-the-clock patient-care-services; they are brought, rather, referred there. Although now with one medical college per district scheme, things are changing^[10] – hopefully for the better. Resultantly, awareness of the dynamics of patient-transport is as important as to what happens when s/he gets admitted and afterward.

A point that needs to be underscored is that tertiary care hospitals serve as a beacon of hope for many. When someone consumes an obnoxious chemical in a village and s/he does not get relief at a local health center, his attendants make every possible attempt to make him reach a center capable enough to handle complications. We need to have the information in mind when interpreting data of their management later on. In one of the paragraphs, the authors mention that few studies have shown that the urban population forms the majority of cases. Here reference number 22 is cited. When one goes through it, one finds that the study was conducted at a private institution. As profit-oriented private healthcare facilities are rarely interested in managing complicated poor patients, they may throw up weird and twisted results. This point also needs to have a counterview as well, as exceptions to the rule occur in the private sector too.

There is another interesting observation under the heading of 'duration of hospital stay'. Here among other points, the authors discover that patients of aluminium phosphide/Celphos stay there relatively for shorter duration. But the fact should not make us guess its lethality. Table 7 shows that the chemical has the highest case fatality rate. In the last paragraph of the *Results*, they highlight that the requirement for a ventilator (is) most commonly associated with aluminium phosphide (poison). When we connect the dots, we find that patients of the presentation either rapidly deteriorate, need life-supportive therapies, and then either do not survive or make it to the other side, that is, survive and are then discharged. We need to teach our residents such fundamental principles together to have a better grasp of the happenings unfolding indoors in a medical-ward.

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Conflicts of interest

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