Work and pleasure—a ‘heady mix’?

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We have all heard of, and experienced, ‘Monday blues’ and how the fingers could be rusty after a vacation or holiday, instead of being rejuvenated. That physician burn-out and over-worked and tired residents and consultants may affect patient outcomes too is intuitive and given, but higher mortality linked to surgeon’s birthday sounds surreal and difficult to comprehend in the first go. However, if one were to believe a recent paper published in the ‘annual tongue-in-cheek Christmas edition’ of the *British Medical Journal* [1], it becomes a gory reality.

As such, ‘the quality of surgical care is not always optimal; however, 5–10% patients, who undergo in-patient surgery die after the procedure, and 20–30% of patients experience complications. Of those complications, 40–60% are considered avoidable, and 20–40% of deaths after surgical procedures are estimated to be preventable’ [1]. Though the World Health Organization (WHO) introduced the concept of ‘check-list’ to reduce preventable causes of errors, however, other sundry and disparate factors, in form of various kinds of distractions in the operating theatre, are not captured in the check-lists and have not been a subject matter of more detailed and authentic scrutiny. This study by Kato et al., looking at the impact of surgeon’s birthday coinciding with the date of surgery, thus lends a new flavour and twist to the subject [1].

In this retrospective, observational analysis of Medicare data from 2011 to 2014, of 980,876 commonly performed procedures by 47,489 surgeons, 2064 (0.2%) were performed on the surgeons’ birthdays [1]. Unadjusted 30-day mortality of the surgeries performed on the operating surgeon’s birthday was 7.0%, while on other days, it was 5.6% (adjusted difference 1.3%, 95% confidence interval 0.1 to 2.5%; $p=0.03$) (Fig. 1). Even volumes had an adverse effect, as mortality was higher when the surgeons performed more procedures on their birthday, compared to a smaller number of

procedures. Though the higher mortality signal, seen in this study, bucked the trend for carotid endarterectomy, gall bladder, and common bile duct procedures, this probably was more related to the small sample size, rather than to the type of surgery. The authors further conducted a series of secondary analyses like using in-hospital mortality instead of 30-day mortality, including both hospital and surgeon fixed effects in the same regression models and excluding potentially outlier surgeons with the highest mortality, and many more, to neutralize confounding factors and to lend more validity and authenticity to the study and found that ‘findings were qualitatively unaffected’. Thereafter, the authors surmised, ‘these findings suggest that surgeons might be distracted by life events that are not directly related to work’. It is no wonder that, intuitively, some surgeons realized these distractions and the pressures of working on one’s birthday, and its suboptimum outcomes, and therefore, 1805 surgeons opted not to work on their birthday, compared with 2144 working 1 day before and 2027 working 1 day after their birthday.

Of the various potential mechanisms offered, higher time pressure to catch up for the evening plans for celebrations was the numero uno. ‘Research suggests that time pressure might impair the ability to avoid errors of intuitive judgment and may cause heuristic decisions during and after operations, which could lead to a higher likelihood of errors and overlooking signals of clinical deterioration in patients’ [1]. Discussions and conversations with other operating team members regarding the celebrations of evening may be distracting enough to lead to medical errors. This may be compounded by congratulatory messages on the cell phone. Even the ambient background noise level in the operating theatre, like music (noise to some!), alarm sounds of monitors and vital equipment, cell phone ring tones and actual usage, and the general clatter and chatter in the operating theatre, may contribute to this distraction. Even ‘outside of health care, studies have found that distractions due to extraneous factors,have a meaningful impact on peoples decision making process’. ‘Studies of how judges make decisions about parole, sentence lengths, and immigration have found that their

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Fig. 1 Adjusted 30-day patient mortality rates from an event study (adjusting for patient characteristics and surgeon fixed effects). The red horizontal line represents the adjusted mortality rate for surgical procedures performed on days other than within 2 weeks of operating surgeon's birthday. Days were grouped into categories of 2 days to avoid unstable estimates. Error bars show 95% confidence intervals [1]

decisions were sensitive to extraneous factors, including taking a food break, experiencing unexpected losses of football games, and an increase in outdoor temperature' [1] lend further credence to the subject at hand. Other miscellaneous reasons forwarded are 'decision fatigue' due to other competing non-work-related issues, the relegation of crucial steps of surgery to trainees and fragmented, and erroneous post-operative decision-making by the inexperienced junior colleagues, due to non-availability of the operating surgeon for any emergency post-operative consults/interventions. Moreover, prescriptions with regard to antibiotics and opioids may be contorted in these settings, and no matter how trivial these decisions may sound, they have the power to 'make or break' in a clinical situation hanging by the proverbial thread.

This study by Kato et al. has all the limitations attendant to an observational retrospective analysis. Over and above, neither the cause of death was captured nor the acuteness of disease factored in, so that there is a possibility that more serious cases, which could not be postponed, were taken up for surgery on the surgeon's birthday and the less acute ones were put off. Yet, it does sensitize that even the best of us are human and prone to all the frailties. Every surgery, no matter how many times one has performed it, should be taken as a new procedure with the same sense of acuity and diligence, as the first procedure performed in the surgeon's experience. It is this sensitization which will protect our patients from the imponderables and the unknowns that every surgery entails. No wonder then, when confronted by an interviewer, 'what's the most difficult and exciting surgery that you have ever performed?', the wisdomic erudite surgeon replied, 'None more challenging than the one I am going to perform tomorrow'!

There is nonchalance in the off-quoted logic of rushing through cases on one's birthday and 'disposing-off' extra or pending workload at a break-neck speed, rather than

scheduling them for a more opportune moment. It is contradictory to the age-old wisdom that we should remain focused and invested in the moment. By former attitude, we neither enjoy the birthday nor we do justice to our patients. It would thus behoove us to break-off from work, attend to the matters at hand, savour the moment, and then return with renewed vigour and focus firmly on the patient, and thereby do full justice, rather than half-heartedly attempting both and making headway with none. Certainly, these are matters worth pondering, not just for the birthdays, but for many more occasions, including when confronted with domestic worries and tribulations and other non-work-related distractions, which are quotidian events in everyone's life. Even the administrators must have an open policy in this regard, whereby clinicians must be allowed, within a framework of certain guidelines, to recuse themselves from operating on certain valid grounds and occasions.

Good sense and wisdom must prevail at all times.

Declarations

Informed consent Not required.

Conflict of interest The author declares no competing interests.

Reference

1. Kato H, Jena AB, Newhouse RL, Tsugawa Y. Patient mortality after surgery on the surgeon's birthday: observational study. *BMJ*. 2020;371:m4381. <https://doi.org/10.1136/bmj.m4381>.

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