Comparative assessment of $\text{TNF}\infty$ and C-reactive protein in patients subjected to open instead of laparoscopic cholecystectomy. Indian J Surg 69(3):99–104

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Dear Sir

We read with interest the article by Haleem et al [1] in the recent issue of IJS. It is intriguing that the levels of $\text{TNF}\infty$ and C-reactive protein (CRP) did not vary between patients undergoing laparoscopic vis-à-vis open cholecystectomy. The authors have used these acute phase reactants as surrogate markers for the post-operative stress response and the lack of difference between the two arms is at odds with obvious superior clinical improvement following laparoscopic cholecystectomy. This begs the question whether $\text{TNF}\infty$ and CRP, which have otherwise been studied extensively, accurately reflect stress response following surgery.

At least in three studies, involving patients undergoing procedures like hernia repair, abdominal aortic surgery, hepatic and pancreatic resections, $\text{TNF}\infty$ was undetectable [2–4]. For these reasons, and following elucidation of the role of another cytokine, IL-6, it is widely believed that IL-6 is a more accurate indicator of post operative stress response [5]. Shenkin et al detected increased IL-6 levels within 90 min of skin incision and peaking at 4 h after cholecystectomy [6]. Cruickshank et al found that IL-6 levels increased progressively from cholecystectomy to more extensive surgery like hip replace-

ment, colorectal resections and abdominal aortic surgery, leading them to conclude that IL-6 levels directly correlate with extent of tissue trauma [7]. More specifically, studies have showed decreased elevation of IL-6 in patients undergoing laparoscopic as opposed to open cholecystectomy [8, 9].

These published results are robust enough to conclude that IL-6 is the principal marker for post operative stress response and that, the stress response is lot less following laparoscopic cholecystectomy. For these reasons we do not agree with Haleem et al [1] that "similar acute phase responses are observed intraoperatively in patients fit for LC when operated on by the open method with easy visceral tissue dissection", a conclusion resulting out of undue reliance on $\text{TNF}\infty$, whose plasma half life is 20 min.

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