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LETTER TO THE EDITOR

Sorting Out the Myths from the Facts: Commentary on Yasemen Adali et al. (2018) article "The Relationship Between Histopathologic Findings and Body Mass Index in Sleeve Gastrectomy Materials"

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Dear Editor,

This letter is a comment on the paper by Adali et al. [1] entitled "The Relationship Between Histopathologic Findings and Body Mass Index in Sleeve Gastrectomy Materials".

In terms of novelty, in the first page of their article, the authors firmly assert "there is no previous study investigating the relationship between gastric histopathological findings and BMI in sleeve gastrectomy patients" [1]. In their discussion section, they decisively affirm "no studies have been conducted to show the relationship between BMI and histopathological findings until now and this is the first study in the literature to note this correlation" [1]. Finally in their concluding page, they confirm that their study "is the first to evaluate the relationship between BMI and histopathological findings" [1]. All these statements seem grossly inaccurate and entirley invalid.

In an article published in the same journal some 15 months earlier, others [2] had already clearly assessed and reported the associations between BMI and different histopathological changes in sleeve gastrectomy (SG) specimens. Specifically, Saafan et al. [2] evaluated the relationship between BMI and follicular gastritis, lymphoid aggregates, GIST, intestinal metaplasia, and chronic active gastritis. Given that Adali et al. [1], in their introduction section, did not highlight the gap in the literature that their research addresses, hence, it is not entirely clear whether they were aware of the work of others [2] in this respect that was published more than a year prior to their article [1], and addressed the gap in knowledge on the relationship between BMI and gastric histopathological findings among SG specimens [2].

In terms of findings, Saafan et al. [2] reported non-significant relationships between BMI and the different histopathologies. Comparisons between cases of follicular gastritis and lymphoid aggregate specimens collectively (precursors of MALT) vs. normal SG specimens (controls) revealed no BMI differences [2]. Follicular gastritis was present in the specimens of the more obese patients as compared with lymphoid aggregates, but the differences were not significant [2]. Likewise, comparisons between patients with GIST or intestinal metaplasia (precursors of gastric adenocarcinoma) vs. normal specimens did not uncover significant BMI differences, and equally, comparisons between patients with chronic active gastritis vs. normal specimens (controls) did not disclose significant BMI differences [2]. In agreement with Saafan et al. [2], Adali et al. [1] found no statistically significant relationship between BMI and type/severity of gastritis, presence/severity of lymphoid follicle, or of lymphoid aggregate. However, in contrast with Saafan et al. [2], they [1] reported significant association between BMI and intestinal metaplasia.

Interestingly, Adali et al. [1] cited Saafan et al. [2] in their article, and enumerated in their discussion section [1] the types of histopathologies reported by Saafan et al. [2]. Such detail highly suggests that Adali et al. [1] were completely aware of Saafan et al.'s [2] findings. However, Adali et al. [1] sufficed to enumerate the types of histopathologies reported by Saafan et al. [2], but certainly and selectively opted not to refer in any way to any of Saafan et al.'s [2] BMI findings, despite that their paper's title [1] suggests that BMI comprised the main thrust of their study.

The differences in Saafan et al.'s [2] findings compared to Adali et al. [1] might be attributed to sample size and/or study design among other factors. In terms of sample size, they

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examined much fewer cases, which they acknowledge as "a limitation due to the low number of the cases", where for many pathologies the groups ranged from 3 to 34 specimens [1]. Saafan et al. [2], on the other hand, compared groups with different pathologies that ranged from 11 to 109 cases or controls.

In terms of study design, Saafan et al. [2] employed "true" controls (i.e., normal SG specimens) as the comparison group that was compared with cases of given pathology/ies. In contrast, Adali et al. [1] seem not have used such controls with normal SG specimens. Rather, they [1] compared the findings of patients with any given pathology to the rest of their sample (that did not have the given pathology but had other pathology/ies). Such lack of "normal" controls as a comparison group might have influenced their reported findings.

The inclusion of normal controls or lack thereof might be a function of the question that is under examination. If the question is "Are their BMI differences between patients with pathologies compared to those with no pathologies in SG specimens?", then a control group with normal specimens would be appropriate. Alternatively, if the question asks "Are their BMI differences between patients with a given pathology compared to patients with other pathology/ies in SG specimens?", then perhaps a control group with other pathology/ies might suffice.

Adali et al. [1] aimed to "investigate the relationship between the BMI of patients and histopathologic findings of SG materials sent to the pathology laboratory for routine examination". To the best of our understanding, this does not explicitly inform the reader as to which of the above two questions they were tackling, or if any other. Hence, it is not feasible to appraise the appropriateness of their comparison group. However, the published literature suggests that normal specimens constitute almost half if not more of the total specimens in laparoscopic SG patients [2–6]. Thus, it might be reasonable to conclude that Adali et al. [1] were not short of normal controls as a comparison group. As in all studies with control group/s, the appropriateness of the control group/s to the question examined is a critical issue, and will influence and determine the validity of the subsequent findings and hence the quality of the evidence generated and authority of a given study.

The relationships between histopathologic findings and BMI in SG specimens are important and remain to be assessed and reported. Should it emerge, beyond reasonable doubt, that there exists significant associations between BMI and precursors of malignancies as identified histopathologically in SG materials, e.g., follicular gastritis and lymphoid aggregates (both can be predecessors of gastric MALT lymphoma [7]); or between BMI and benign tumor with potential for malignancy (e.g., GIST) [8]; or between BMI and precursors for gastric adenocarcinoma (e.g., intestinal metaplasia [9]), then such findings would probably influence research, affect practice, and impact on the risk information provided to obese individuals and patients.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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