Volume and Quality in Visceral Medicine

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Everyone would probably agree that quality is of utmost importance in medicine. However, the topic becomes difficult once quality is to be determined and evaluated. There is an ongoing discussion on how quality in visceral oncologic surgery is to be measured. Is caseload the only (and sufficient) parameter to be taken into account? Is it the caseload of the individual surgeon or is it the case volume of the hospital that is crucial? The discussion gets even more controversial concerning the consequences if quality parameters cannot be fulfilled by the respective institution. This issue of VISCERAL MEDICINE focusses on the various aspects of caseload and quality measurement in visceral oncologic surgery.

Bauer and Honselmann [1] give a comprehensive overview on the various aspects of this discussion. They cumulate the existing data on the volume-outcome relationship in surgery focusing on complex oncologic surgery. The authors also show caseload-dependent learning curves of the individual surgeon for different surgical procedures in terms of operation times and patient outcomes. In contrast, the authors address the problem of education in hospitals where minimal caseload numbers are not reached and emphasize the importance of realistic operation catalogues for surgical board examinations. In addition, this article delivers information on the crucial influence of center caseload on outcomes due to the better handling of complications in high-volume centers based on structural and procedural advantages. In conclusion, there is a strong demand for a minimum caseload in certain operations. Nevertheless, the threshold of the respective minimal caseload is yet to be determined.

Keßler and Heidecke [2] address the difficulty of defining quality in medicine. They provide a definition of the relevant parameters that should be addressed and describe the different options of internal and external quality assessment. Registries initiated by the medical societies are valuable and should include the evaluation not only of caseload but also of structures, processes, and outcome measures. These evaluations can and should be used for certification processes. The evaluation of quality by the health system authorities is another instrument to assess quality.

Quality assurance by routine data is an instrument that is currently used in Germany. Nevertheless, patient-related risk stratifi-

cation is weak and the German QSR ('Qualitätssicherung mit Routinedaten') system carries the risk of penalizing emergency hospitals with a high percentage of high-risk patients.

Wellner and Keck [3] demonstrate a method of defining quality parameters based on registry data. In this paper, the development of quality indicators based on registry analysis of the German StuDoQ registry for pancreatic surgery is demonstrated. Registry analyses by the German Society for Visceral and Abdominal Surgery (DGAV StuDoQ) are helping to identify valid parameters of quality assurance and implement methods of risk stratification. Societies such as the DGAV can then provide peer counseling to address quality standards that have not been reached and can help to assure the best performance in settings outside of structural high-volume settings.

Three additional papers highlight the aspect of volume and quality in the three main visceral oncologic entities, i.e. pancreatic, esophageal and colorectal surgery, from various viewpoints.

Krautz et al. [4] stress the importance of caseload for pancreatic surgery. They address the problem that still 50% of hospitals performing pancreatic surgery fail to meet minimum caseload requirements. Outcome in pancreatic surgery depends at least likewise on the expertise of the whole hospital team in terms of recognition and management of postoperative complications. Therefore, the authors strongly argue for the implementation of even higher minimum volumes than required today, as is currently practiced in the Netherlands.

Glatz and Höppner [5] argue in an analogous manner concerning esophageal surgery. They present data that strongly correlate hospital volume to surgical outcome. Similar to the paper of Krautz et al. [4], the authors show that volume alone is not the only parameter with respect to mortality but that hospital infrastructure, interdisciplinary teams, and expertise in patient selection are of crucial importance. In Germany, only the minority of hospitals fulfill the minimum caseload required for esophageal surgery without any change during the last years. The authors call for strict compliance with the minimal caseload requirements, emphasizing that higher caseloads might further improve postoperative outcomes.

Link et al. [6] draw a different picture for colorectal surgery. Data presented here are much less clear when compared to pancreatic and esophageal surgery. The authors emphasize the importance of the individual experience of the treating surgeon, thereby reflecting the subjective view of many surgeons in small- and mid-volume hospitals in Germany. Furthermore, they argue that volume alone is not sufficient to evaluate quality but that training and expertise, the existence of multidisciplinary teams, and the establishment of audits should be considered as well.

The discussion led in this journal has to be considered with caution. In evaluation of the presented results, it is important to have

in mind that the strict implementation of minimal caseload demands has strong implications on the hospital landscape in Germany with respect to education, the acquisition of personnel, and, last but not least, the economic future of many hospitals. The conflicting opinions and sometimes subjective, differing views are given a forum in the 'Interdisciplinary Discussion' chaired by Keck and Herrlinger [7] in this issue of *VISCERAL MEDICINE*. The conflicting views presented here have to be taken into account and addressed to achieve a broader adherence to the minimal caseload requirements as well as a better quality for our patients.

References

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