Endoscopic management of an unexpected cause of esophageal perforation

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Author contribution: Zheng- lei Xu and De-feng Li designed the study. De-Feng Li drafted the manuscript. Zheng- lei Xu revised the manuscript. Li-sheng Wang and Zheng- lei Xu performed the operation. All authors read and approved the final manuscript.
Case report

A 46-year-old man complained of epigastric pain for 3 months without previous disease history. An esophagogastroduodenoscopy (EGD) revealed a submucosal tumor (SMT) adjacent to a diverticulum in the lower esophagus (Figure 1A). Endoscopic ultrasound (EUS) examination implied homogeneous hypoechoic lesions (4*2mm) originated from the muscularis mucosae (Figure 1B). The images of chest CT scan were normal (Figure 1C). Subsequently, the SMT was successfully removed with endoscopic mucosal resection (EMR) (Effect 3, Duration 2, Interval 3, ERBE, Germany) as usual (Figure 1D). Histopathology confirmed a leiomyoma (Figure 1E). Unfortunately, the patient was suffered from severe chest pain and dyspnea in the second day after the operation. The chest CT scan revealed pneumomediastinum and left lower lobe inflammatory indicating the esophageal perforation (Figure 1F). Then, the EGD was performed again, and showed an esophageal ulcer in the lower esophagus (Figure 1G). Finally, the esophageal ulcer was successfully closed using clips (Micro-Tech, China) and nylon loop (Olympus, Japan) (Figure 1H). The patient was eventually recovered in a week after his fasting and anti-infection therapies.

Discussion

EMR is an feasible and safe modality to remove the esophageal SMT originating from muscularis mucosae less than 10mm, and the adverse events are rare. However, the patient was undergone esophageal perforation in this study. A possible explanation could be the adjacent diverticula perforation due to deep thermal injury when the SMT removed, because the esophageal diverticula was absence of cricopharyngeal muscle. Therefore, we would like to remind the possible complication of esophageal perforation when removing small esophageal SMT adjacent to an esophageal diverticulum.

Acknowledgements

This work was supported by Natural Science Foundation of Guangdong Province (No. 2018A0303100024), Three Engineering Training Funds in Shenzhen (No. SYLY201718, No. SYJJY201714 and No. SYLY201801), Technical Research and Development Project of Shenzhen (No. JCYJ20150403101028164, No. JCYC20170307100911479 and No. JCYJ20190807145617113), National Natural
Science Foundation of China (No. 81800489).

Conflict of Interest
The authors declare no conflict of interest.

Reference

Figure 1: A, A submucosal tumor (SMT) (red arrow) adjacent to a diverticulum (black arrow) in the lower esophagus; B, The SMT originated from the muscularis mucosae (4*2 mm) (red arrow); C, Chest CT scan was normal before the operation; D, The SMT was successfully removed; E, Immunohistochemistry showed that SMA is positive, whereas CD117 is negative; F, Chest CT scan revealed pneumomediastinum and left lower lobe inflammatory (red arrow); G, A defect in the lower esophagus after operation; H, The defect was closed using clips and nylon loop (red arrow).