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Tentative application of middle gastrectomy in early gastric cancer in the middle one-third of the stomach

Qin-Shu Shao

Zhejiang Provincial People's Hospital, China

This lecture will address a variety of topics related to the use of middle gastrectomy with regional lymph node resection as a new therapeutics in early gastric cancer in the middle one-third of the stomach. And will include discussion of: the therapeutics for gastric cancer in recent years; compare the advantage and disadvantage of these therapeutics; compare the difference of surgery time, lymph node resection, aerating time, hospitalization time postoperation, feed after 3 months and Visick graded index between group A (middle gastrectomy with regional lymph node resection), B (total gastrectomy with D1 lymph node resection) and C (endoscopic mucosal resection). We found that middle gastrectomy with regional lymph node resection in early gastric cancer will not increase the risk and time of surgery, and it can reduce the risk of lymph node migrating, complication related to surgery, and improve the quality of life.

Biography

Qin-Shu Shao is a Surgery Professor, Chief Physician, and Director of Gastrointestinal Surgery of Zhejiang Provincial People's Hospital. He has published more than fifty articles in important national journals, 8 articles in SCI. He is a Standing Committee of Zhejiang Provincial Surgery Branch of Chinese Medical Association, a member of the National gastric Professional Committee of Chinese Anti-Cancer Association, a Professional Committee of hepatobiliary and pancreatic tumors surgery of Zhejiang Province, a magazine editorial of "Chinese Journal of Gastrointestinal Surgery" and "Chinese Journal of Digestive Surgery".

Ex-vivo experiment study for a new cluster-type microwave ablation antenna

Youjun Liu, Qun Nan, Mingai Li, Xuemei Guo, Xiaohui Nie, Kai Yan and Fei Zhai

Beijing University of Technology, China

Object: Microwave ablation which has the advantages of minimally invasive and high-efficiency was more and more used into the cancer treatment. When the tumor diameter is less than 3cm, the ablation effect of a single microwave antenna is ideal. But for larger tumors, it must be a higher ablation time and a higher power and can result in the reduction of the antenna performance.

Method: A new cluster-type microwave antenna which has three microwave ablation antenna was studied in *ex-vivo* bovine. The temperature distribution and 60°C isotherm which can decide the scope of the effective ablation were explored. The experiments carried out with net microwave power of 40W, 60W, 80W, 100W; ablation time was 5min, 10min, 15min, respectively. a

Resluts: For the power of 40W, the maximum temperature, area, volume, diameter and longitudinal diameter was 88.81°C, 9.05cm², 7.92cm³, 2.90cm, 3.83cm, respectively with the ablation time 5 min while 99.18°C, 19.04cm², 50.94cm³, 3.79cm, 5.84cm, respectively with the ablation time 10min and 106.09°C, 25.63 cm², 81.66cm³, 4.61cm, 6.72cm, respectively with the ablation time 15min. For the power of 60W, the maximum temperature, area, volume, diameter and longitudinal diameter was 100.05°C, 25.37cm², 80.35cm³, 5.34cm, 6.91cm, respectively with the ablation time 5min while 108.86°C, 42.22cm², 185.72cm³, 6.32cm, 8.10cm, respectively with the ablation time 10min and 110.22°C, 49.80cm², 244.97cm³, 7.23cm, 8.72cm, respectively with the ablation time 15min. The 60°C isotherm was ellipsoid-like.

Conclusion: This new cluster-type microwave antenna is suitable for the tumor (diameter is between 3.83-4.6cm) for 40W and the larger tumor (diameter is between 5.34-7.23 cm) for 60W. When the power is set 80W and 100W, the ablation area is too large, and the antennas is easy to breakage, so it is not recommended for ablation. The study may make an important support for the development and clinical application of this new type of antenna.

lyjlma@bjut.edu.cn