

食管癌微创外科治疗的发展与现状

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摘 要: 食管癌微创外科治疗有望解决传统食管癌手术创伤大,术后生命质量差的问题。随着胸腔镜、腹腔镜等设备和技术的发展以及肿瘤治疗理念的更新,食管癌的微创外科治疗近年来取得了较大进展。

关键词: 腹腔镜;胸腔镜;食管癌

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Development and Current Status of Minimally Invasive Surgery for Esophageal Cancer

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Abstract: Conventional open operation for esophageal cancer brings significant surgical trauma and result in poor quality of life postoperation. Minimally invasive surgery makes rapid progress in recent years with the development of equipments such as thoracoscopy and laparoscopy and update of oncologic treatment concept achieves great progress in minimally invasive surgery.

Key words: thoracoscopy; laparoscopy; esophageal cancer

食管癌是消化道常见肿瘤之一,被 WHO 列为世界第 7 位常见恶性肿瘤。近代医学对食管癌手术治疗的研究已有 100 多年的历史。随着食管外科技术的发展,手术切除率已从 50 年代的 60.7% 上升到现在的 80%~90%,5 年生存率上升到 25%~47%^[1]。开放性手术是传统的食管癌术式,经过多年的发展和考验,无疑是安全成熟的手术方式。其优点是手术暴露好,直视下操作,手术彻底。同时也存在手术时间长,创伤大,术后生活质量差的弊端。

20 世纪 80 年代,随着光学技术的发展和微型摄像系统的应用,内镜外科迅速发展。食管切除术的微创外科技术是从 20 世纪 90 年代初期开始发展起来的,最初仅仅是用胸腔镜游离食管以减少开胸引起的并发症,但仍然需要用标准的上腹部正中切口

开腹游离胃,制作管状胃,并行颈部吻合。腹腔镜用于食管癌手术始于 De 等^[2]在 1995 年报道用腹腔镜经膈肌裂孔行全食管切除术。此后, Luketich 等^[3]在 1998 年报道联合使用胸腔镜和腹腔镜完成食管切除手术。随着腔镜技术的不断普及,食管癌的微创外科得到迅速发展。国内由于设备的限制以及技术上的质疑,曾一度制约了腔镜下食管癌手术的发展。近 10 年来,随着技术和设备的发展,肿瘤治疗理念的更新,特别是新一代腔镜成像系统的问世,为在腔镜下进行食管癌切除和淋巴结清扫提供了有利条件。目前,食管癌的微创外科已积累了丰富的经验,手术技巧日趋完善,且取得良好的临床疗效^[4-8]。食管微创外科主要是指运用腔镜以及相应的器械代替传统的开胸、开腹的开放性手术,其主要是胸腔镜以及腹腔镜在术中的运用。胸腔镜下食管癌手术大致可分为胸部小切口辅助胸腔镜食管切除术、手辅助胸腔

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镜下食管切除术以及全纯胸腔镜下食管切除术。

1 胸部小切口辅助胸腔镜食管切除术

小切口辅助胸腔镜食管切除术具有开放术式和微创术式相结合的特点。其有着术者所熟悉的三维视觉和手感信息,可沿用开放手术的手法和习惯,同时也具有相对创伤小的特点。与传统开放手术相比,小切口辅助胸腔镜食管切除术对胸壁破坏小,减轻术后疼痛,减少对呼吸功能的影响。同时因腔镜视野放大,提高了手术的精确度,有利于对双侧喉返神经旁淋巴结的清扫,同时减少对迷走神经的支气管支、支气管动脉以及胸导管的损伤^[9]。此方法已被不少学者采用。Thomson 等^[10]通过对 165 例胸腔镜辅助下食管癌手术和 56 例开放性食管癌手术的随访,认为在远处转移率上无统计学差异(影响因素包括肿瘤 T 分期、分化程度、病变长度以及阳性淋巴结数目),而在局部复发率上胸腔镜组却低于开放手术组。Lata 等^[11]研究了 14 例用胸腔镜辅助的食管癌手术,发现手术时间较开放手术有所延长,但术中出血明显减少,胸部淋巴结清扫数目多于开放手术,而且住院期间并发症,特别是呼吸系统并发症明显降低。Wang 等^[12]报道,胸腔镜辅助下食管癌手术后 6 个月内的短期生存质量明显高于开放手术。此方法在一定程度上减少了常规开胸手术带来的创伤,但仍需一小切口,不是真正意义上的胸腔镜下手术。

2 手辅助胸腔镜下食管切除术

为在胸腔镜下操作更加简便直观,更加安全,有学者采用了手辅助胸腔镜下食管切除术。该方法是指使用胸腔镜的同时,通过开腹经膈肌裂孔插入手指进行辅助操作。日本学者 Okushiba^[13]以及国内杜贾军等^[14]均采用了此种方法。他们认为纯腔镜手术难度较大,不利于缩短手术时间。用手通过膈肌裂孔辅助胸腔镜的胸内操作,既避免了开胸手术带来的创伤,也使得胸腔镜手术变得简单,更能缩短手术时间。但在理论上,此方法有可能加重膈肌和纵隔的损伤。同时,手术体位需照顾到胸部和腹部同时操作,对胸内淋巴结清扫亦带来不便。

3 全纯胸腔镜下食管切除术

纯胸腔镜手术是指不辅助任何小切口,仅凭胸腔镜下通过 2~3 个 Trocar 操作孔进行食管游离,以及胸部淋巴结清扫。此方法对机体创伤更小,术后恢复快。但对术者要求较高,要求术者对胸部解剖结构非常熟悉,且有丰富的开放性食管癌手术经验。大部分学者认为此方法安全可行。Higashino 等^[15]报道了 243 例纯胸腔镜下食管切除患者,认为与开放手术相比,总手术时间、胸部操作时间及切除淋巴结数目相同,但手术失血少于开放手术,随访后发现,胸腔镜下食管癌手术术后生活质量下降较开放手术少,术后并发肺炎和喉返神经损伤发生率较开放手术高。但自从采用腹腔镜行腹部操作后,肺炎发生明显减少。Takeuchi 等^[16]通过经口放置吻合器法,在胸腔镜下行胸内吻合,认为胸腔镜下食管癌根治术安全可行。Ninomiya 等^[17]对 132 例胸腔镜下食管癌根治术的手术时间、出血量、并发症、淋巴结清扫数目等进行了分析,认为胸腔镜下食管癌根治术是安全有效的。Zhang 等^[18]回顾性分析了 147 例胸腔镜下食管切除并行纵隔淋巴结清扫,也认为其是安全可行的。Takemura 等^[19]认为如无明显纵隔和颈部淋巴结转移,胸腔镜下食管癌根治术并行二野淋巴结清扫是安全合适的。甚至有学者认为胸腔镜下食管癌根治术安全性比开放手术更高^[20]。另外,对于游离食管时的体位,不少学者认为俯卧位是最佳方式^[21-24],也有学者认为左侧卧位与俯卧位对手术效果影响不大^[25],俯卧位的优势仍需进一步观察研究^[26]。

4 腹腔镜下胃游离术

腹腔镜于 1901 年首次被报道,此后在治疗胃食管反流中积累的丰富经验为食管癌的腹部微创外科的开展提供了先驱条件。有学者用腹腔镜游离胃,同时经膈肌裂孔行食管癌切除^[27]。此方法可减少因开胸带来的创伤,但因暴露较差,无法系统清扫胸部淋巴结,适用于早期或无法耐受开胸手术的食管癌患者。Perry 等^[28]通过研究 40 例腹腔镜经纵隔食管癌手术,认为对于早期、分化较好的食管癌患者,此手术方式缩短手术时间和住院时间,减少术中出血量。亦有学者使用腹腔镜游离胃,再经右胸开放切口行

食管癌根治,认为此方法可减少对腹壁的创伤,进而减少对呼吸功能的影响。Schröder 等^[29]基于回顾性分析,认为腹腔镜下胃游离相对开放性 Ivor-Lewis 手术,术后并发症及死亡率较低。Kitagawa 等^[30]用腹腔镜游离胃进行食管癌根治术,认为术中出血少,气管拔管早,ICU 住院时间短,术后死亡率低。Kitagawa 等^[31]也认为腹腔镜游离胃较开放手术在减少术后感染及加快恢复方面具有优势。

5 联合胸、腹腔镜下食管癌根治术

另一种较新的方法是用腹腔镜游离胃联合胸腔镜行食管癌手术,此种方法既能减少开胸带来的创伤,又能将开腹创伤降至最低。但对术者的技术要求较高,不但要求术者熟悉开胸开腹的传统术式,还要求有胸腔镜和腹腔镜的技能和经验,故只有少数有条件的大医院开展。从目前的报道来看,多数学者认为联合胸、腹腔镜下食管癌根治术是安全可行的^[32-36],不但加快了术后恢复,且减少术后并发症^[37,38]。Pham 等^[39]比较了 44 例联合胸、腹腔镜食管切除术和 46 例传统 Ivor-Lewis 手术,手术时间略有延长,但术中出血量明显减少和术后切口感染并发症的发生率明显下降。Merritt^[36]回顾性研究了 15 例联合胸、腹腔镜下 Ivor-Lewis 手术,认为此术式是安全可行的。但也有学者对此术式的安全性提出质疑,Mao 等^[40]通过研究发现联合胸、腹腔镜下食管癌根治术虽然减少了功能性创伤,但是包括吻合口瘘及喉返神经损伤等在内的技术性并发症发生率升高。

此外,有报道显示,腔镜下手术远期生存率不低于传统 Ivor-Lewis 手术。Nguyen 等^[41]回顾性分析了 38 例联合胸、腹腔镜食管癌手术,3 年生存率为 57%。Martin 等^[42]通过对 36 例食管癌患者实施联合胸、腹腔镜下食管切除术,并随访了 30 个月,4 年生存率为 44%。胸腔镜下手术是安全的,远期生存率也令人满意。当前的研究结果令人鼓舞,远期疗效有待大样本的前瞻性研究。

全腔镜下手术的另一个好处是术后生命质量的提高。有学者对联合胸、腹腔镜下食管癌根治术后生命质量进行了对比研究,发现与经腹、右胸二切口 Ivor-Lewis 手术以及经左胸一切口食管癌根治术相比,联合胸、腹腔镜下食管癌术后患者生命质量明显

提高^[43]。

6 食管癌微创外科的疗效与前景

微创食管外科应用于食管癌的治疗目前尚存在争议,如手术适应证、手术费用、治疗效果等,但焦点在于微创手术是否能达到肿瘤切除和淋巴结清扫要求。对于食管癌的外科治疗,目前的主流观点认为,食管癌是全身性疾病,其预后主要取决于肿瘤的生物学行为和病理分期,手术治疗只是局部治疗。各段食管癌患者,无论采取哪种手术方式,经左胸或右胸、一切口或二、三切口,对患者的 3 年和 5 年生存率的影响甚微。因此,只要适应证掌握准确,选择合适的病例,具有熟练的镜下操作技术,理应可以达到和开放手术相同的远期生存率^[44,45]。Lazzarino 等^[46]比较了 1996~2007 年英格兰地区食管癌患者在接受微创及开放食管癌术后的生存情况,发现前者术后 1 年生存率高于后者。而且随着腔镜器械的不断改良及手术经验的不断积累,微创手术的适应证也将越来越广。Tanaka 等^[47]已对 51 例新辅助化疗后的进展期食管癌患者行胸腔镜下食管癌根治术,效果令人满意。Nguyen 等^[48]甚至已在联合胸、腹腔镜下完成食管切除以及结肠代食管术。所以我们有理由相信微创食管癌手术的发展有着非常广阔的前景。

总之,食管癌微创手术用胸腔镜和腹腔镜代替了开胸和开腹,减少了手术创伤,有着传统手术方式无法比拟的优势。并且,根据目前的经验,认为其在技术上是可行的,与传统开放性食管癌手术一样安全。随着肿瘤外科治疗理念的更新以及对患者术后生命质量的重视,食管癌微创手术将成为食管癌外科的主要发展方向。

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