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腹腔镜下行子宫切除术及淋巴清扫术治疗老年子宫颈癌的疗效

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摘要目的:探讨腹腔镜与开腹下行子宫切除术及淋巴清扫术治疗老年子宫颈癌患者的临床疗效。**方法:**选取2014年1月至2016年1月我院收治的60例老年子宫颈癌患者,随机分为两组,每组30例,A组患者接受开放性子宫切除术及淋巴清扫术,B组患者在腹腔镜下行子宫切除术及淋巴清扫术,比较两组患者的手术情况、术后恢复情况以及术中、术后并发症的发生情况和随访期间的生活质量。**结果:**B组患者手术中淋巴结的清扫数目明显比A组多($P<0.05$),术中出血量和术后使用镇痛泵的次数明显少于A组($P<0.05$),抗生素的使用时间、术后排气时间、膀胱功能恢复时间、引流管滞留时间、住院时间较A组患者明显缩短($P<0.05$),术中大出血以及术后尿潴留、淋巴囊肿的发生率显著低于A组($P<0.05$);术后3个月和6个月的I-QOL以及FACT-G评分显著高于A组($P<0.05$)。**结论:**腹腔镜下行子宫切除术加盆腔淋巴清扫术治疗老年子宫颈癌患者的临床疗效显著,有利于患者术后恢复,并有效提高患者术后生活质量。

关键词:腹腔镜;子宫切除术;老年子宫颈癌;临床疗效;淋巴清扫术

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The Clinical Effect of Hysterectomy and Lymph Node Dissection under Laparoscope on Elderly Patients with Cervical Cancer

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ABSTRACT Objective: To investigate the curative effect of hysterectomy and lymph node dissection with laparoscope or laparotomy on elderly patients with cervical cancer. **Methods:** 60 elderly patients with cervical cancer were enrolled in our hospital from January 2014 to January 2016 and randomly divided into two groups. Group A (n=30) accepted hysterectomy and lymph node dissection with laparotomy, and Group B (n=30) adopted same surgery with laparoscope, the operation condition and postoperative recovery were compared between two groups. The intraoperative and postoperative complications of all patients were recorded and analyzed, and the quality of life of patients was evaluated in the following-up period. **Results:** The number of lymph node dissection in Group B was significantly more than that of Group A ($P<0.05$); the intraoperative blood loss and the times of using postoperative analgesia pump in Group B were significantly fewer than those in Group A ($P<0.05$). The time of postoperative exhaust, bladder function recovery, drainage tube retention and hospital stay in Group B were all shorter than those in Group A ($P<0.05$). The incidence of massive hemorrhage during operation and postoperative urinary retention and lymphatic cyst in Group B were significantly lower than those patients in Group A ($P<0.05$). After operation 3 and 6 month, the I-QOL and FACT-G scores of patients in Group B were significantly higher than those in Group A ($P<0.05$). **Conclusions:** Hysterectomy and lymph node dissection under laparoscope had remarkable curative effect on the elderly patients with cervical cancer, which improved the postoperative recovery and the quality of life of patients.

Key words: Laparoscope; Hysterectomy; Elderly patients with cervical cancer; Curative effect; Lymph node dissection

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前言

子宫颈癌(Cervical cancer)是最常见的妇科恶性肿瘤之一,发病率仅次于乳腺癌,我国每年确诊的宫颈癌患者约占全世界新确诊患者的30%以上,其中20%的患者死于该病,严重威胁患者的生命健康^[1,2]。近几年,老年子宫颈癌患者数量随着我国人口老龄化趋势的发展逐年增加^[3]。我国早期宫颈癌的检出率

因临床诊断技术不断成熟而随之升高,目前临床治疗I-IIa期子宫颈癌以广泛或次广泛性切除子宫联合盆腔淋巴清扫术为主^[4,5]。传统开放性手术创口大,且术后恢复差,特别是老年患者的身体承受能力有限,因此选择合适的手术方法对于治疗老年子宫颈癌患者非常有必要。近几年,由于我国内镜器械逐渐完善,术者的相关操作技术愈加成熟,因此微创手术逐渐广泛应用于临床^[6]。目前,腹腔镜辅助子宫切除术以及盆腔淋巴清扫术已逐渐被临床接受,且临床疗效受到医务人员以及患者的肯定^[7-9],但是对于老年患者采用腹腔镜手术的安全性以及有效性目前还存在一定的争议。因此,本研究以我院老年子宫颈癌患者

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为研究对象,探讨腹腔镜下行子宫切除术及淋巴清扫术对患者临床疗效的影响及其安全性,现将研究结果报道如下:

1 材料和方法

1.1 一般资料

选取 2014 年 1 月至 2016 年 1 月我院收治的 60 例老年子

宫颈癌患者为研究对象,所有患者经阴道镜、妇科检查、B 超、MRI 及病理学检查确诊,接受广泛性子宫切除术和盆腔淋巴结清扫术,所有患者均签署手术知情同意书,并通过医院伦理委员会。按照手术方法,将所有患者随机分为两组:A 组和 B 组,每组 30 例患者。两组患者基本资料见表 1,两组一班资料比较差异无统计学意义($P>0.05$),具有可比性。

表 1 两组患者一般资料的比较($\bar{x}\pm s$)

Table 1 The comparison of general conditions between two groups($\bar{x}\pm s$)

Group	Number	Age/year	Pathology sub-types			FIGO stages	
			Squamous cell carcinoma	Adenocarcinoma	Adenosquamous carcinoma	Phage I	Phage II a
Group A	30	62.5± 5.2	26	2	2	13	17
Group B	30	64.2± 6.4	27	2	1	12	18

1.2 治疗方法

A 组患者先行盆腔淋巴结清扫术,然后打开腹腔行广泛全子宫切除术,手术方法按照常规进行;B 组患者腹腔镜下行子宫全切除术加盆腔淋巴结清扫术:在脐周围做切口并穿刺留置 trocar,建立 CO₂ 气腹,维持气压 12-15 mmHg 左右。由 trocar 放置腹腔镜,对患者盆腔及中上腹部进行探查;在腹壁两侧做穿刺留置 trocar,并由此插入操作器械,在腹腔镜引导下清扫盆腔淋巴结,然后行广泛性子宫切除术。清扫的淋巴结及切除的子宫均由阴道残端取出。最后用生理盐水冲洗盆腹腔并留置盆腔阴道引流管。

1.3 观察指标

比较两组患者的手术情况以及术后恢复情况;记录两组患者围术期并发症的发生情况并进行统计学分析;随访期间通过调查两组患者尿失禁生活质量量表(I-QOL)以及癌症治疗功能总体评价量表(FACT-G)评价患者术后的生活质量。I-QOL 评价标准:总积分 22-110 分,涵盖行为限制、心理变化以及社交障碍等,共 22 条,分数越高,尿失禁现象越不显著,生活质量越

好;I-QOL 评分=(总积分 -22)/88*100;FACT-G 评价标准:涵盖生理、情感状况,社会、家庭状况以及功能状况等,共 27 条目,分数越高,生活质量越好。

1.4 统计学方法

采用 SPSS17.0 软件对数据进行统计学分析,计量资料以均数± 标准差($\bar{x}\pm s$)表示,组内比较采用重复测定数据的方差分析,两组间比较采用 t 检验;计数资料采用 χ^2 检验分析;以 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 两组患者手术情况的比较

比较两组患者手术过程的情况,由表 2 可见,两组患者手术的成功率均为 100%,手术进行时间比较差异无明显统计学意义($P>0.05$),但是 B 组患者术中出血量与 A 组比较明显较低($P<0.05$),且手术过程清扫淋巴结的个数明显比 A 组多($P<0.05$)。

表 2 两组患者的手术情况比较($\bar{x}\pm s$)

Table 2 The comparison of operation condition between two groups($\bar{x}\pm s$)

Groups	Number	Operation time /min	Operative blood loss /mL	Lymph node dissection	Surgical success rate /%
Group A	30	205.8± 48.5	486.7± 187.6	16.8± 2.8	100
Group B	30	228.2± 58.6	328.6± 138.5*	19.2± 3.2*	100

Note: * $P<0.05$: compared with Group A.

2.2 两组患者术后恢复情况的比较

比较组患者手术后的恢复情况,由表 3 可见,B 组患者术后使用镇痛泵的次数明显较 A 组少($P<0.05$),B 组患者术后使用抗生素的时间、术后通气时间、膀胱功能恢复时间、引流管滞留时间、术后下床活动时间以及住院时间与 A 组比较明显较短($P<0.05$)。

2.3 两组患者术中术后并发症的发生情况比较

记录两组患者手术中以及术后并发症的发生情况,由表 4 可见,两组患者术中及术后并发症的总发生率之间的差异无明

显统计学意义($P>0.05$),但是 B 组患者术中发生大出血、术后发生尿潴留以及淋巴囊肿现象的发生率明显低于 A 组患者($P<0.05$)。

2.4 两组患者随访期间尿失禁生活质量量表(I-QOL)以及癌症治疗功能总体评价量表(FACT-G)的比较

比较两组患者术后的生活质量,对两组患者进行为期 6 个月的随访,每隔 3 个月通过 I-QOL 以及 FACT-G 量表评价两组患者术后的生活质量,由表 5 可见,B 组患者在术后 3 个月以及术后 6 个月的 I-QOL 以及 FACT-G 评分显著高于 A 组患

者($P<0.05$)。

表 3 两组患者术后恢复情况的比较($\bar{x}\pm s$)
Table 3 The comparison of postoperative recovery between two groups ($\bar{x}\pm s$)

Groups	Group A(n=30)	Group B(n=30)
Times of using postoperative analgesia pump	25.0± 3.4	9.0± 2.5*
Time of using antibiotic/d	7.1± 2.6	3.3± 2.4*
Postoperative exhaust time/h	50.8± 5.3	34.6± 4.8*
Time of bladder function recovery/d	15.3± 2.6	11.8± 2.1*
Retention time of drainage tube/d	4.5± 0.3	2.9± 0.5*
Activated time of leaving bed/d	3.1± 1.0	2.0± 0.8*
Hospital stay/d	13.6± 2.8	8.9± 2.3*

Note: * $P<0.05$: compared with Group A.

表 4 两组患者围术期并发症发生情况的比较 [例(%)]
Table 4 The comparison of the incidence of complications during perioperative period between two groups [n(%)]

Groups	Group A(n=30)	Group B(n=30)
Intraoperative complications		
Intestinal injury	1(3.3)	0(0.0)
Massive hemorrhage	3(10)	1(3.3)*
urinary tract injury	0(0.0)	0(0.0)
Total	4(13.3)	1(3.3)
Postoperative complication		
Incision infection	2(6.6)	0(0.0)
Urinary retention	11(36.7)	4(13.3)*
intestinal obstruction	1(3.3)	0(0.0)
Lymphatic cyst	5(16.7)	3(10)*
Total	19(63.3)	7(23.3)

Note: * $P<0.05$: compared with Group A.

表 5 两组患者随访期间生活质量的比较($\bar{x}\pm s$)
Table 5 The comparison of quality of life during follow-up between the two groups ($\bar{x}\pm s$)

Groups	Group A(n=30)	Group B(n=30)
I-QOL score	Before treatment	91.1± 5.8
	Postoperative 3 months	58.2± 10.3
	Postoperative 6 months	81.3± 12.1
FACT-G score	Before treatment	48.3± 5.3
	Postoperative 3 months	57.6± 6.2
	Postoperative 6 months	66.8± 5.8

Note: * $P<0.05$: compared with Group A.

3 讨论

国际妇产科联盟 (International Federation of Gynecology and Obstetrics, FIGO) 根据宫颈癌的发展将其分为早期宫颈癌和晚期宫颈癌, 其中 I a1-II a 期属于前者, 而 II b 期及以上则为晚期^[10]。加拿大学者 Elit L 通过检索 2000 年 -2014 年发表在 Pubmed 的相关文献综述发现, 女性宫颈癌发病年龄在 30-39

岁以及 60-69 岁之间呈现双峰分布, 也就是说宫颈癌高发于这两个年龄阶段^[11]。研究表明无论何种疾病, 年龄对患者手术治疗的临床疗效存在较大影响^[12], 60-69 岁的老年女性患者身体各项机能处于退化状态, 免疫功能减弱, 对创伤的应急能力降低, 术后恢复差, 自身的生理及病理特征都极大的增加患者的手术风险以及术后发生并发症的概率。姚书忠研究团队发现老年患者择期手术术后死亡率是非老年组的 4 倍, 若急诊手

术,其死亡率甚至增至 10 倍^[13]。因此,老年特殊人群进行手术时要格外综合评价安全性和有效性,选择合适的手术方式。

近年来,随着临床诊断技术的逐渐完善和成熟,早期子宫颈癌的检出率和确诊率也逐渐升高,美国国立癌症综合网(National comprehensive cancer network, NCCN)于 2014 年发布《NCCN 宫颈癌临床研究指南》^[14]指出若不考虑保留生育功能,治疗早期宫颈癌首选根治性切除子宫联合清扫双侧盆腔淋巴结,尽可能切除病灶及周围可能病变的组织以及清扫盆腔淋巴结,降低术后并发症的发生。然而,开放性手术由于创伤大,术后不易恢复,老年患者耐受性差。近几年,大量临床研究报道,腔镜辅助子宫切除术联合盆腔淋巴结清扫术治疗早期宫颈癌临床疗效显著^[15,16]。开放性子宫切除术,于手术野暴露差,肉眼很难清晰分辨直肠、膀胱、内生殖器甚至相关神经^[17,18],给手术的顺利进行带来极大风险,增加术后并发症的发生率,影响患者术后生存质量。腹腔镜辅助手术治疗子宫颈癌,其 CO₂ 气腹的膨胀作用以及镜头的灵活性^[19],极大程度增加手术视野,腹腔镜的 10 倍率的放大作用提高术者对盆腔微小病灶以及淋巴结辨识度^[20]。本研究结果显示 B 组患者接受腹腔镜辅助完成手术,淋巴结的清扫数目明显比 A 组多,说明腹腔镜的放大作用提高淋巴结的清扫率和手术疗效。腹腔镜对于血管出血以及黏连组织的分离有较明显的优势,本研究结果也显示 B 组患者术中出血量明显少于 A 组,有临床研究表明 CO₂ 气腹造成的气腹压可以有效遏制小血管出血。

此外,B 组患者在腹腔镜的辅助下完成广泛子宫切除术加盆腔淋巴结清扫术,术后恢复情况明显优于 A 组,B 组的手术微创性显著减少患者术后使用镇痛泵的次数以及抗生素的使用时间;同时从两组患者术后排气时间、膀胱功能恢复时间等分析得出 B 组患者术后肠胃功能的恢复时间较 A 组显著缩短,这可能与腹腔镜的微创优势有关,即微创手术降低手术时对盆腔内环境的干预;B 组患者术后引流管的滞留时间、住院时间等显著短于 A 组患者。分析两组患者术中术后并发症的发生情况,B 组患者术中大出血以及术后尿潴留、淋巴囊肿的发生率显著低于 A 组,比较两组患者随访期间的尿失禁生活质量以及癌症治疗功能总体生活质量,B 组患者术后 3 个月和 6 个月的 I-QOL 以及 FACT-G 评分显著高于 A 组,即 B 组患者术后的生活质量高于 A 组。综合随访期间量表评分以及围术期并发症的发生情况,可见在腹腔镜的辅助下,手术的精准度得到极大的提高,因损伤神经而引发的神经功能缺失并发症降低,患者术后生活质量提高。

综上所述,腹腔镜下行子宫切除术加盆腔淋巴清扫术治疗老年子宫颈癌患者的临床疗效显著,有利于患者术后恢复,并有效提高患者术后生活质量。

参 考 文 献(References)

- [1] Landy R, Pesola F, Castañón A, et al. Impact of cervical screening on cervical cancer mortality: estimation using stage-specific results from a nested case-control study[J]. Br J Cancer, 2016, 115(9): 1140-1146
- [2] Moore KN, Java JJ, Slaughter KN, et al. Is age a prognostic biomarker for survival among women with locally advanced cervical cancer treated with chemoradiation? An NRG Oncology/Gynecologic Oncology Group ancillary data analysis[J]. Gynecol Oncol, 2016, 143(2): 294-301
- [3] Ojha RP, Jackson BE, Tota JE, et al. Younger age distribution of cervical cancer incidence among survivors of pediatric and young adult cancers[J]. Gynecol Oncol, 2014, 134(2): 309-313
- [4] Kyō S, Kato T, Nakayama K. Current concepts and practical techniques of nerve-sparing laparoscopic radical hysterectomy[J]. Eur J Obstet Gynecol Reprod Biol, 2016, 207: 80-88
- [5] Pauzie A, Gavid M, Dumollard JM, et al. Infracentimetric cervical lymph node metastasis in head and neck squamous cell carcinoma: Incidence and prognostic value [J]. Eur Ann Otorhinolaryngol Head Neck Dis, 2016, 133(5): 307-311
- [6] Melin AA, Kalaskar S, Taylor L, et al. Transanal endoscopic microsurgery and transanal minimally invasive surgery: is one technique superior?[J]. Am J Surg, 2016, 10(16): 30548-30557
- [7] Ai B, Zhang Z, Liao Y. Laparoscopic and thoracoscopic esophagectomy with intrathoracic anastomosis for middle or lower esophageal carcinoma[J]. J Thorac Dis, 2014, 6(9): 1354-1357
- [8] 杨菁,贺敏,邢辉,等.腹腔镜下广泛子宫切除+盆腔淋巴结清扫术与传统开腹手术在早期子宫恶性肿瘤治疗中的比较[J].中国医药导报,2014,11(28): 47-50
Yang Jing, He Min, Xing Hui, et al. Comparison of laparoscopic radical hysterectomy and pelvic lymphadenectomy with traditional laparotomy for the treatment of early uterine malignancy [J]. China Medical Herald, 2014, 11(28): 47-50
- [9] Boruta DM, Fagotti A, Bradford LS, Laparoendoscopic single-site radical hysterectomy with pelvic lymphadenectomy: initial multi-institutional experience for treatment of invasive cervical cancer[J]. J Minim Invasive Gynecol, 2014, 21(3): 394-398
- [10] Meva J, Chaudhary RK, Bhaduri D, et al. Lacunae in International Federation of Gynecology and Obstetrics (FIGO) classification for cervical carcinoma: observational study using TNM classification as comparator[J]. Int J Gynecol Cancer, 2013, 23(6): 1071-1077
- [11] Prummel MV, Young SW, Candido E, et al. Cervical cancer incidence in ontario women: differing sociodemographic gradients by morphologic type (adenocarcinoma versus squamous cell)[J]. Int J Gynecol Cancer, 2014, 24(7): 1341-1346
- [12] Kang HW, Seo SP, Kim WT, et al. Impact of Young Age at Diagnosis on Survival in Patients with Surgically Treated Renal Cell Carcinoma: a Multicenter Study[J]. J Korean Med Sci, 2016, 31(12): 1976-1982
- [13] 姚书忠,姜红叶.老年妇女腹腔镜手术适应证及利弊分析[J].中国实用妇科与产科杂志,2007,23(11): 833-835
Yao Shu-zhong, Jiang Hong-ye. Analysis of the indications and advantages/disadvantages of laparoscopic surgery in elderly women [J]. Chinese Journal of Practical Gynecology and Obstetrics, 2007, 23(11): 833-835
- [14] 周晖,卢淮武,彭永排,等.《2015 年 NCCN 宫颈癌临床实践指南》解读[J].中国实用妇科与产科杂志,2015,30(3): 185-191
Zhou Hui, Lu Huai-wu, Peng Yong-pai, et al. NCCN clinical practice guidelines for cervical cancer in 2015[J]. Chinese Journal of Practical Gynecology and Obstetrics, 2015, 30(3): 185-191

(下转第 4789 页)

- review of the literature[J]. Eye & contact lens, 2010, 36(5): 296-299
- [21] Woreta FA, Davis GW, Bower KS. LASIK and surface ablation in corneal dystrophies[J]. Survey of ophthalmology, 2015, 60(2): 115-122
- [22] Rathi VM, Taneja M, Murthy SI, et al. Phototherapeutic keratectomy for recurrent granular dystrophy in postpenetrating keratoplasty eyes [J]. Indian journal of ophthalmology, 2016, 64(2): 140-144
- [23] Jung SH, Han KE, Stulting RD, et al. Phototherapeutic keratectomy in diffuse stromal haze in granular corneal dystrophy type 2 [J]. Cornea, 2013, 32(3): 296-300
- [24] Sykakis E, Papadopoulos R, Lake D. Phototherapeutic keratectomy with mitomycin C for recurrent granular corneal dystrophy under femtosecond-assisted anterior lamellar keratoplasty[J]. Cornea, 2015, 34(6): e17-18
- [25] Carrwik C, Stenevi U. Lattice corneal dystrophy, gelsolin type (Meretoja's syndrome)[J]. Acta ophthalmologica, 2009, 87(8): 813-819
- [26] Sorour HM, Yee SB, Peterson NJ, et al. Recurrence of chromosome 10 Thiel-Behnke corneal dystrophy (CDB2) after excimer laser phototherapeutic keratectomy or penetrating keratoplasty [J]. Cornea, 2005, 24(1): 45-50
- [27] Ogawa A, Yamaguchi T, Mitamura H, et al. Aetiology-specific comparison of long-term outcome of deep anterior lamellar keratoplasty for corneal diseases [J]. The British journal of ophthalmology, 2015 [Epub ahead of print]
- [28] Rama P, Knutsson KA, Rojo C, et al. Unusual early recurrence of granular dystrophy after deep anterior lamellar keratoplasty: case report[J]. Arquivos brasileiros de oftalmologia, 2013, 76(2): 126-128
- [29] Pantanelli SM, Herzlich A, Yeaney G, et al. Recurrence of granular corneal dystrophy type I deposits within host stroma after non-descemet baring anterior lamellar keratoplasty [J]. Cornea, 2014, 33(12): 1348-1351
- [30] Mashima Y, Kawai M, Yamada M. Corneal electrolysis for recurrence of corneal stromal dystrophy after keratoplasty [J]. The British journal of ophthalmology, 2002, 86(3): 273-275
- [31] Ferrari G, Ueno H, Bignami F, et al. Trigeminal stereotactic electrolysis induces dry eye in mice [J]. Acta ophthalmologica, 2013, 91(2): e162-163
- [32] Khairova R, Pawar R, Salvadore G, et al. Effects of lithium on oxidative stress parameters in healthy subjects[J]. Molecular medicine reports, 2012, 5(3): 680-682
- [33] Choi SI, Kim EK. Autophagy in granular corneal dystrophy type 2[J]. Experimental eye research, 2016, 144: 14-21
- [34] Choi SI, Kim BY, Dadakhujaev S, et al. Inhibition of TGFB1 expression by lithium: implications for TGFB1-linked corneal dystrophy therapy [J]. Investigative ophthalmology & visual science, 2011, 52(6): 3293-3300
- [35] Yuan C, Zins EJ, Clark AF, et al. Suppression of keratoepithelin and myocilin by small interfering RNAs (siRNA) in vitro [J]. Molecular vision, 2007, 13: 2083-2095
- [36] Courtney DG, Atkinson SD, Moore JE, et al. Development of allele-specific gene-silencing siRNAs for TGFB1 Arg124Cys in lattice corneal dystrophy type I [J]. Investigative ophthalmology & visual science, 2014, 55(2): 977-985
- [37] Liao X, Cui H, Wang F. Establishment of a transgenic mouse model of corneal dystrophy overexpressing human BIGH3 [J]. International journal of molecular medicine, 2013, 32(5): 1110-1114
- [38] Yamazoe K, Yoshida S, Yasuda M, et al. Development of a Transgenic Mouse with R124H Human TGFB1 Mutation Associated with Granular Corneal Dystrophy Type 2 [J]. PloS one, 2015, 10(7): e0133397

(上接第 4758 页)

- [15] Hertel H, Köhler C, Michels W, et al. Laparoscopic-assisted radical vaginal hysterectomy (LARVH): prospective evaluation of 200 patients with cervical cancer[J]. Gynecol Oncol, 2003, 90(3): 505-511
- [16] 谢秀敏, 郭丽璇, 陈晓敏, 等. 腹腔镜子宫切除术的临床效果及应用价值研究[J]. 现代生物医学进展, 2012, 12(14): 2727-2729
Xie Xiu-min, Guo Li-xuan, Chen Xiao-min, et al. The clinical effectiveness and value of laparoscopic hysterectomy [J]. Progress in modern biomedicine, 2012, 12(14): 2727-2729
- [17] Hajibandeh S, Hajibandeh S, Gumber AO, et al. Laparoscopy versus laparotomy for the management of penetrating abdominal trauma: A systematic review and meta-analysis[J]. Int J Surg, 2016, 34: 127-136
- [18] Jiang H, Wang SY, Jin XL, et al. Surgical treatment of incarcerated calculi via laparoscopic bile duct exploration using laparotomy biliary lithotomy forceps[J]. Exp Ther Med, 2016, 12(4): 2314-2316
- [19] Barrio J, Errando CL, San Miguel G, et al. Effect of depth of neuromuscular blockade on the abdominal space during pneumoperitoneum establishment in laparoscopic surgery [J]. J Clin Anesth, 2016, 34: 197-203
- [20] Sato T, Watanabe M. Present laparoscopic surgery for colorectal cancer in Japan[J]. World J Clin Oncol, 2016, 7(2): 155-159