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经支气管镜氩离子凝固术治疗伴有咯血的晚期中心型肺癌的临床观察

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摘要 目的:探讨经支气管镜氩离子凝固术治疗伴有咯血的晚期中心型肺癌的疗效。**方法:**选取 2011 年 12 月-2013 年 6 月期间我院收治的晚期中心型肺癌咯血的患者 60 例,将其随机分为观察组(30 例)和对照组(30 例),观察组给予经支气管镜氩离子凝固术联合全身化疗,对照组给予经支气管镜介入局部用药联合全身化疗,对比两组患者治疗后的临床疗效、24h 动脉血气分析、肺功能、止血有效率及治疗后 3 天、3~7 天,7 天复发率以及总复发率和不良反应情况。**结果:**治疗后两组患者的临床症状均得到一定的改善,观察组患者的临床有效率为 80.0%(24/30)显著高于对照组的 56.7%(17/30),差异具有统计学意义($P<0.05$);观察组患者在发热、呼吸困难、咳嗽、胸痛及咯血等方面的症状缓解率均显著高于对照组,比较差异均有统计学意义(均 $P<0.05$);治疗后观察组肺功能和 24h 动脉血气分析各项指标均显著优于治疗前,观察组患者的以上指标均显著优于对照组,差异均有统计学意义(均 $P<0.05$);治疗后观察组患者的止血有效率为 100%,显著高于对照组的 56.7%(17/30),且观察组患者术后 3 天、3~7 天,7 天复发率以及总复发率均小于对照组,两组止血有效率和总复发率比较差异均有统计学意义(均 $P<0.05$);观察组患者不良反应的发生率为 10.0%,对照组为 13.3%,两组相比无显著差异($P>0.05$)。**结论:**经支气管镜氩离子凝固术联合全身化疗治疗老年晚期中心型肺癌咯血具有较好的临床疗效,止血迅速有效,且复发率低,能够缓解呼吸道阻塞症状,改善呼吸功能,是一种不错的选择,值得在临床普遍推广与应用。

关键词:经支气管镜氩离子凝固术;晚期中心型肺癌;咯血;疗效

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Clinical Effect of Argon Plasma Coagulation by Bronchoscope Intervention in Treatment of 60 Cases of Elderly Patients with Central Lung Cancer Combined with Hemoptysis

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ABSTRACT Objective: To investigate the clinical effect of argon plasma coagulation by bronchoscope intervention in treatment of elderly patients with central lung cancer combined with hemoptysis. **Methods:** 60 cases of late central type lung cancer patients were selected from our hospital during the period from December 2011 to June 2012. Which were randomly divided into the observation group (30cases) and the control group (30 cases). The patients of the observation group were treated with argon plasma coagulation by bronchoscope intervention combined with systemic chemotherapy, the control group were treated with topic bronchoscopic intervention combined with systemic chemotherapy. The clinical efficacy of the two groups, 24h arterial blood gas analysis and pulmonary function, the record bleeding rate after 3 days, 3 to 7 days, 7 days and the total recurrence rate after treatment and the adverse reactions after treatment were compared. **Results:** After treatment, the clinical symptoms of the patients had certain improvement. The clinical effective rate of the observation group was 80.0% (24/30), significantly higher than 56.7% (17/30) of the control group, the difference was statistically significant ($P<0.05$); The remission rates of fever, chest tightness and dyspnea, cough, chest pain, hemoptysis in the observation group after treatment were significantly higher than that in the control group, the difference was statistically significant ($P<0.05$); After treatment, the 24h arterial blood gas analysis and pulmonary function were all better than before treatment, and the above indicates of the observation group were significantly better than those of the control group, the difference was statistically significant ($P<0.05$); After treatment, the hemostatic effective rate of the observation group was 100%, significantly higher than 56.7% (17/30) of the control group. The record bleeding rate after 3 days, 3 to 7 days, 7 days and the total recurrence rate of the observation group were significantly less than that of the control group after treatment, the difference of the hemostatic effective rate and total recurrence rate was statistically significant between two groups($P<0.05$); The adverse reaction rate of the observation group was 10.0% and the adverse reaction rate of the control group was 13.3%, the difference was not statistically significant ($P>0.05$). **Conclusion:** The treatment of hemoptysis in central lung cancer of elderly

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patients with argon plasma coagulation by bronchoscope intervention combined with systemic chemotherapy has better efficacy. The recurrence rate was low and it can significantly alleviate the symptoms of obstruction and improve respiratory function. It is a good choice and is a safe and effective treatment method; it is worth to be popularized in clinical application.

Key words: Argon plasma coagulation by bronchoscope intervention; Advanced central lung cancer; HAemoptysis; Effect

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前言

近年来,肺癌的发病率和死亡率迅速增长,是对人类健康和生命威胁最大的恶性肿瘤之一^[1]。目前全球肺癌的其发病率和死亡率呈明显的上升趋势,男性发病率显著高于女性^[2]。由于肺癌发病比较隐匿,早期基本没有任何症状,七到八成肺癌病人一旦被发现就已晚期,丧失了最佳的治疗时机。晚期由于大的空洞或肿瘤破溃入支气管与肺血管出现难以控制的大咯血,严重威胁患者的生命,必须采取及时有效的治疗措施^[3]。本文探讨经电子支气管镜氩离子凝固术联合全身化疗治疗老年晚期中心型肺癌咯血的临床疗效及其安全性旨在为临床治疗提供理论支持,特报道如下。

1 资料与方法

1.1 一般资料

选取 2011 年 12 月 -2013 年 6 月期间我院收治晚期中心型肺癌咯血患者 60 例,所有患者均经肺部 CT 和支气管镜检查确诊,按字数表法将其随机分为观察组(30 例)和对照组(30 例)。其中观察组男 19 例,女 11 例;年龄 67~79 岁,平均(72.5±3.8)岁;病程 6 个月~2 年,平均(12.2±2.3)月;其中鳞癌 12 例,腺癌 10 例,小细胞癌 8 例;按国际 TNM 分期Ⅲa 期 10 例,Ⅲb 期 9 例,Ⅳ期 11 例;小量咯血者 16 例,中量咯血者 14 例。对照组男 18 例,女 12 例;年龄 66~78 岁,平均(71.8±4.3)岁;病程 4 个月~2 年,平均为(13.6±2.4)月;其中鳞癌 13 例,腺癌 10 例,小细胞癌 7 例;按国际 TNM 分期Ⅲa 期 11 例,Ⅲb 期 11 例,Ⅳ期 8 例;小量咯血者 17 例,中量咯血者 13 例。两组患者一般资料均无明显差异($P>0.05$),具有可比性。

1.2 治疗方法

所有患者于治疗前进行常规血细胞、心电图、呼吸功能及凝血功能检查,观察组患者采用经支气管镜氩离子凝固术,术前禁食 6 h,行电子支气管镜检查以确定肿瘤的生长部位、

大小以及气管和支气管阻塞程度,采用爱尔博氩气刀(德国爱尔博公司),将氩气刀接地电极板放置于患者下肢肢体,与皮肤良好接触,连接氩气瓶阀门,经活检将氩气刀导管导入病变部位,找到出血部位,距出血部位 5 mm 以内,脚踏电凝开关行支气管镜氩离子凝固术,每次 3~5 s,功率调节至 30~50 W,若病灶表面出现泛白,甚至黝黑且出血停止为佳,若出血未停止则提高功率。对照组患者实施经支气管镜介入药物治疗,经支气管镜活检孔插入导管,应用凝血酶 500U 和 / 或肾上腺素 1-2 mg 和 / 或蛇毒血凝酶 1-2U 稀释至 5 mL 局部喷洒出血部位。术后两组患者均行全身化疗,及肺癌对症治疗。

1.3 观察指标

比较两组患者治疗后临床疗效,24 h 动脉血气分析和肺功能,并记录治疗后止血的有效率及治疗后 3 天、3~7 天、7 天复发率以及总复发率和不良反应。

1.4 疗效评定

临床疗效评定^[4]:显效:咳嗽、咯血、呼吸困难及胸痛明显减轻,胸部影像学显示气道肺炎、肺不张消失拓宽,内镜下肿块缩小 2/3,狭窄的气管变宽明显;有效:咳嗽、咯血、呼吸困难及胸痛有所缓解,胸部 CT 显示有所改善,内镜下肿块缩小 1/3,狭窄的气道变宽;无效:临床表现无好转,内镜下肿块大小、气道大小无明显变化。

1.5 统计学方法

应用 SPSS13.0 统计分析软件进行,计量资料以均值±标准差($\bar{x} \pm s$)表示,检验符合正太分布的,行两组之间的 t 检验,计数资料用百分比表示,采用卡方检验(χ^2)。取 $P<0.05$ 时差异具有统计学意义。

2 结果

2.1 临床疗效比较

观察组患者的临床有效率为 80.0%(24/30),显著高于对照组的 56.7%(17/30),差异具有统计学意义($P<0.05$),详见表 1。

表 1 两组临床疗效比较[n(%)]

Table 1 Comparison of clinical curative effect of two groups[n(%)]

组别 Groups	例数 Cases	完全缓解 Complete remission	显效 Excellence	有效 Effect	无效 Invalid	总有效率 Total effective rate
观察组 Observation group	30	4(13.3)	8(26.7)	12(40.0)	6(20.0)	24(80.0)△
对照组 Control group	30	2(6.7)	6(20.0)	9(30.0)	13(43.3)	17(56.7)

注:与对照组相比, $\chi^2=3.96$, $\Delta P<0.05$ 。

Note:compared with control group, $\chi^2=3.96$, $\Delta P<0.05$.

2.2 两组患者症状缓解率比较

经治疗后,两组患者临床症状均有所缓解,观察组患者的发热、呼吸困难、咳嗽、胸痛及咯血等症状的缓解率分别为

83.2%、90.8%、70.3%、50.2%及 86.7%,均明显高于对照组的 51.3%、76.8%、53.2%、34.6%及 74.6%,两组比较差异均有统计学意义(均 $P<0.05$),见表 2。

表 2 两组患者症状缓解率比较(n,%)

Table 2 Comparison of symptom remission rates between two groups(n,%)

组别 Groups	例数 Cases	发热 Fever	胸闷、呼吸困难 Chest tightness, Dyspnea	咳嗽 Cough	胸痛 Chest pain	咯血 Hemoptysis
观察组 Observation group	30	83.2 [△]	90.8 [△]	70.3 [△]	50.2 [△]	86.7 [△]
对照组 Control group	30	51.3	76.8	53.2	34.6	74.6

注:与对照组比较, $\chi^2=6.24, 5.96, 6.43, 6.03, 4.12, \Delta P < 0.05$ 。

Note: compared with control group, $\chi^2=6.24, 5.96, 6.43, 6.03, 4.12; \Delta P < 0.05$.

2.3 两组患者治疗前后血气分析指标和肺功能情况比较

治疗后两组患者 24h 动脉血气分析各项指标和肺功能改善情况均显著优于治疗前,且观察组患者 24h 动脉血气分析的

各项指标和肺功能改善情况均显著优于对照组,差异均有统计学意义(均 $P < 0.05$),详见表 3。

表 3 两组患者治疗前后血气分析指标和肺功能情况比较($\bar{x} \pm s, n=30$)Table 3 Comparison of the blood gas analysis and pulmonary function in both groups before and after treatment ($\bar{x} \pm s, n=30$)

指标 Indexes	观察组 Observation group		对照组 Control group	
	治疗前 Before treatment	治疗后 After treatment	治疗前 Before treatment	治疗后 After treatment
PH	7.20 $\pm$ 0.12	7.33 $\pm$ 0.08 ^{△▲}	7.19 $\pm$ 0.11	7.24 $\pm$ 0.10 [△]
PaO ₂ (mmHg)	51.3 $\pm$ 6.31	81.3 $\pm$ 5.97 ^{△▲}	50.9 $\pm$ 5.67	67.8 $\pm$ 5.35 [△]
PaCO ₂ (mmHg)	88.2 $\pm$ 6.42	54.3 $\pm$ 6.23 ^{△▲}	87.6 $\pm$ 6.31	77.1 $\pm$ 5.95 [△]
SaO ₂ (%)	64.9 $\pm$ 5.97	90.6 $\pm$ 5.24 ^{△▲}	65.1 $\pm$ 5.58	80.4 $\pm$ 5.26 [△]
FEV1.0(L)	1.01 $\pm$ 0.12	1.71 $\pm$ 0.24 ^{△▲}	1.03 $\pm$ 0.11	1.14 $\pm$ 0.21 [△]
FVC(L)	1.72 $\pm$ 0.13	2.69 $\pm$ 0.32 ^{△▲}	1.73 $\pm$ 0.10	1.89 $\pm$ 0.19 [△]

注:与治疗前相比, $t=7.22, 14.33, 20.76, 19.79, 20.41, 26.64, \Delta P < 0.05$;

与对照组相比, $t=3.85, 9.22, 14.49, 7.52, 8.07, 11.77, \Delta P < 0.05$ 。

Note: Compared with before treatment, $t=7.22, 14.33, 20.76, 19.79, 20.41, 26.64, \Delta P < 0.05$;

compared with control group, $t=3.85, 9.22, 14.49, 7.52, 8.07, 11.77, \Delta P < 0.05$.

2.4 两组患者治疗后咯血复发情况比较

治疗后观察组患者的止血有效率为 100%(30/30),对照组为 56.7%(17/30) 两组止血有效率比较差异有统计学意义

($\chi^2=16.60, P < 0.05$),且观察组患者术后 3 天、3~7 天、7 天复发率以及总复发率均小于对照组,两组总复发率比较差异有统计学意义(均 $P < 0.05$),详见表 4。

表 4 两组治疗后咯血复发情况比较 [n(%),n=30]

Table 4 Comparison of the recurrence rate between two groups after treatment[n(%),n=30]

组别 Groups	3 天 After 3 days	3~7 天 After 3 to 7 days	7 天 After 7 days	总复发率 Total recurrence rate
观察组 Observation group	1(3.3)	3(10.0)	7(23.3)	11(36.7) [△]
对照组 Control group	2(6.7)	5(16.7)	11(36.7)	18(60.0)

注:与对照组相比, $\chi^2=3.89, \Delta P < 0.05$ 。

Note: compared with control group, $\chi^2=3.89, \Delta P < 0.05$.

2.5 两组患者不良反应情况比较

治疗后观察组患者不良反应主要有心律失常 1 例,气胸 1 例,气管穿孔 1 例,不良反应的发生率为 10.0%,对照组心律失常者有 1 例,气胸 1 例,气管穿孔 2 例,不良反应的发生率为 13.3%,两组相比无显著差异($\chi^2=0.13, P > 0.05$)。

3 讨论

肺癌的发病率和死亡率是近年增长最快,对人类生命威胁最大的恶性肿瘤之一^[78]。据统计目前其发病率和死亡率呈逐年上升趋势,约 80%以上是中心型肺癌,中心型肺癌的发生与吸烟有非常密切的关系,长期吸烟的患者肺癌的发病率是不吸烟

人群的 10~20 倍^[9,10]。晚期患者出现咯血是非常严重的临床表现,若咯血量多,患者可因突然窒息而导致死亡,因此,若临床出现咯血要及时采取有效的治疗措施。

经支气管镜介入局部用药是近年来国内外治疗咯血较安全有效的方法,治疗过程中应用肾上腺素进行止血能够促进纤维蛋白原转变为纤维蛋白,加速患者凝血过程,保护血管上皮细胞,有利于机体组织的迅速恢复^[11],但是在临床应用发现此方法即可止血效果不明显,往往得不到患者的满意^[12]。近年来随着介入治疗技术的改进和对肺癌研究的深入,经支气管镜氩离子凝固术治疗老年晚期中心型肺癌是不错的选择。老年人耐受力差,一般肺癌晚期不主张实施手术治疗,但是为了缓解患

者的临床症状,改善呼吸通气,延长患者的生存时间,经支气管镜氩离子凝固术是一种不错的选择^[13-15]。本研究经支气管镜氩离子凝固术治疗的观察组患者有效率为 80.0%,显著高于对照组的 56.7%,差异具有统计学意义($P<0.05$),且观察组患者在发热、呼吸困难、咳嗽、胸痛及咯血等症状的缓解率均明显高于对照组,差异具有统计学意义($P<0.05$),结果提示,经支气管镜氩离子凝固术治疗晚期肺癌咯血的疗效优于经支气管镜介入药物治疗,分析原因,经支气管镜氩离子凝固术治疗时利用高频、高压电流和氩气形成的等离子体来传递热量,将氩气流电离成氩气离子,产生传递电流的作用,通过单极技术将高频电极均匀流向组织,将肿瘤组织烫伤,使病灶表面出现泛白,甚至黝黑且出血停止,若出血未停止则提高功率继续治疗,因而止血效率较高;另外,观察组患者治疗后血气分析各指标较对照组改善更为明显,且复发率较低,比较差异具有统计学意义($P<0.05$),而治疗过程中观察组患者不良反应发生率也低于对照组,该结果进一步证明,经支气管镜氩离子凝固术联合全身化疗治疗老年晚期中心型肺癌咯血具有较好的止血效果,且其治疗后患者不良反应少,利于术后恢复,更适用于增生型气道狭窄、瘢痕型气道狭窄等良恶性肿瘤。经支气管镜氩离子凝固术具有高效的止血效应,有效率达到 99%以上,迅速缓解患者咯血带来的威胁,且术后并发症少,是一种安全有效的方法。

总之,经支气管镜氩离子凝固术联合全身化疗治疗老年晚期中心型肺癌咯血具有较好的临床效果,治疗后复发率低、无并发症的发生,且复发率低,能够缓解呼吸道阻塞症状,改善呼吸功能,是一种不错的选择,值得在临床普遍推广与应用

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