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西北地区无痛支气管镜的临床应用

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摘要 目的:观察西北地区开展无痛支气管镜检查方法的优越性。**方法:**将 600 例患者随机分为 A、B 两组, A 组为观察组, 给予异丙酚复合瑞芬太尼静脉麻醉法, 经喉罩人工辅助通气, B 组为对照组, 给予单纯利多卡因表面麻醉, 方法为利多卡因氧气加压口鼻面罩雾化, 鼻腔、气管内滴药, 连续观察患者在支气管镜诊疗前、过程中血压、心率、血氧饱和度变化及术中、术后反应情况。**结果:**观察组支气管镜操作前、中的血氧饱和度无明显改变, 心率、血压有所升高, 术后舒适度明显高于对照组。**结论:**无痛支气管镜诊疗时可以获得满意的麻醉效果, 优于常规局麻法, 值得临床推广应用。

关键词:支气管镜; 无痛; 利多卡因; 优越性

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The Clinical Application of Painless Bronchoscopy in Northwest Area

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ABSTRACT Objective: To observe the superiority of the painless bronchoscopy under general anesthesia. **Methods:** 600 patients were randomly divided into two groups, Group A as observation group and group B as control group. There were 300 cases in group A under general anesthesia, given propofol and remifentanyl, and others in group B given lidocaine in throats and local trachea with Pressure atomization, the blood pressure levels, heart rate and pulse oxygen saturation in operation and after operation continuously observed. **Results:** Compared with preoperative situations, the pulse oxygen saturation was no significantly different in Group A during bronchoscopy, blood pressure levels and heart rate increased, and patients in group A felt more comfortable than those in group B. **Conclusion:** Painless bronchoscopy has better quality, less bad memories, and more acceptability by patients, and it deserves further application in clinic.

Key words: Bronchoscopy; Painless; Lidocaine; Superiority

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近年来电子支气管镜作为呼吸系统疾病诊断、治疗的重要技术,已在临床中广泛应用^[1]。它具有较大的视野和进入段支气管的能力,直观地观察支气管内情况,很多病变在纤支镜下就可得到诊断。利用纤支镜还可进行活检、刷检、灌洗、局部注射药物等。纤维支气管镜从常规检查发展到急救,从肺内发展到肺外,是目前临床工作中不可缺少的检查、治疗工具之一,据调查在国内基本普及,在三级甲等医院已达 100%,在许多区县医院也已开展。但常规支气管镜检查时患者容易产生剧烈咳嗽、窒息等感觉,使得部分患者对支气管镜检查极为恐惧。如何获得一种使受检查者无痛苦、简单易行、安全可靠的方法,是呼吸科医师奋斗的目标。我院已开展了 300 例无痛支气管镜检查,效果满意。现报道如下。

1 资料与方法

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1.1 研究对象

2013 年 1 月至 2013 年 10 月于宝鸡高新人民医院呼吸科门诊及住院部接受电子支气管镜检查及治疗患者 600 例,均无麻醉禁忌症,其中男 322 例,女 278 例,平均年龄 15~88 岁(54.6 岁)。随机分为 A、B 两组, A 组为观察组, 予异丙酚复合瑞芬太尼静脉麻醉法, B 组为对照组, 利多卡因局部麻醉法。

1.2 术前准备

所有患者均接受常规检查,包括血常规、出凝血时间、心电图、胸部 CT,部分慢性阻塞性肺疾病或肺心病患者进行血气分析和肺功能检查。

1.3 麻醉方法

观察组所有患者均建立静脉通路,常规心电图、血压、血氧饱和度和呼末 CO₂ 监测。先给予面罩充分供氧,保持 SO₂ 在 97~100%, 依次给予瑞芬太尼 0.5 μg/kg、异丙酚 2~2.5 mg/kg 静推,待患者进入全身麻醉状态,睫毛反射消失,立即置入连有三通管装置的喉罩于咽喉部,气囊充气,使气道口完全封闭,三通管侧端连接球囊呼吸器,行手动人工呼吸,保持呼吸频率 14-20 次/分,呼末 CO₂ 在 35~45 mmHg,维持血氧饱和度,顶端开口则用于电子支气管镜检查后治疗时出入。在检查或治疗过程

中,根据手术时间长短可最佳异丙酚用量,尽量以最小剂量药物维持患者麻醉状态,术后能迅速清醒^[1,2]。对照组采用支气管镜常规麻醉方法进行操作,2%利多卡因 5 mL 氧气加压雾化吸入 10~15 min,在鼻腔、气管内按情况追加利多卡因,总量不超过 20 mL^[3]。两组在性别、年龄、病程、一般情况、合并症等方面无显著差异。

1.4 观察项目

观察术中心率、血压、血氧饱和度变化。术中监测患者的 Ramsay 镇静评分^[4]。1 级:忧虑、焦躁、不安;2 级:合作,有定向力,镇静;3 级:仅对大声命令有反应;4 级:入睡,仅对眉间轻弹有反应;5 级:对眉间轻弹迟钝;6 级:无反应。术后不适的主观评价及满意度调查。

1.5 统计学处理

使用 SPSS 11.0 统计软件进行统计学分析,资料以 $\bar{x} \pm s$

表示,采用方差分析,满意度用秩和检验。 $P < 0.05$ 为差异有统计学意义。

2 结果

2.1 观察组镇静分级评估

300 例患者镇静效果均在 4~6 级;麻醉诱导时间 1~3 min;麻醉时间检查为 3~6 min(平均 4 min),治疗为 20~120 分钟(平均 30 min)。术后苏醒时间 1~6 min(平均 2 min)。对照组镇静分级评估在 1~2 级之间。

2.2 术中心率、血压、血氧饱和度的情况

300 例实施无痛支气管镜检查/治疗者(观察组)在支气管镜进入声门后收缩压明显升高,舒张压变化不大,心率明显加快,血氧饱和度无明显变化。与对照组相比,术中血压、心率、血氧饱和度变化均不明显。

表 1 两组患者术中生命体征的变化($\bar{x} \pm s$)

Table 1 Difference of BP, HR and SPO₂ between two groups

组别 Groups	血压 SBP(mmHg)	血压 DBP (mmHg)	心率 HR(次/分)	血氧饱和度 SO ₂ (%)
观察组 Observation group	130.20± 12.62	76.60± 6.26	90.20± 10.26	91.26± 2.68
对照组 Control group	120.23± 15.14	73.26± 10.26	96.40± 16.68	88.62± 8.68
P 值	< 0.05	> 0.05	< 0.05	< 0.05

2.3 支气管镜操作时间、术中反应性症状比较

300 例观察组患者支气管镜检查、活检时间较对照组缩短($P < 0.05$),经支气管镜下灌洗、介入时间明显短于对照组($P <$

0.05),术中呛咳、呼吸困难、出血、喉痉挛等并发症发生率明显低于对照组($P < 0.05$)。

表 2 两组患者术中反应及并发症比较

Table 2 Comparison of complication and reaction during operation

组别 Groups	检查时间 Examination time(min)	治疗时间(min) Therapy time	呛咳(%) Cough	呼吸困难(%) Dyspnea	出血(%) Blood	喉痉挛(%) Laryngeal spasm
观察组 Observation group	3.84 ± 0.56	20.84± 5.56	1.5	0.5	3	1
对照组 Control group	6.84 ± 2.56	30.64± 8.56	40.6	10.2	8	8.06
P 值	< 0.05	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05

注:检查时间指行支气管镜检查、活检所需时间;治疗时间指支气管镜下灌洗、介入治疗(冷冻、氩气刀)所需时间。

Note: Examination time is the minutes needed for the bronchoscopy or (and) biopsy, and therapy time is the minutes needed for the argon plasma coagulation or(and) cryoablation by bronchoscopy.

2.4 术后合并症

观察组有 5 例老年男性患者出现尿潴留,均有前列腺增生病史,其中 4 例经局部热敷 2~4 小时后排尿通畅,1 例患者经留置导尿 24 小时排尿通畅。有 3 例患者出现支气管哮喘发作,估计与喉罩刺激咽部诱发喉痉挛相关,经静滴甲基强的松龙 40 mg 及无创呼吸机正压通气 2~4 小时均缓解。6 例患者咽部明显疼痛。10 例患者剧烈咳嗽,含服可待因片 1 粒约 1 小时后缓解。26 例患者术后咯血,咯血量为少量,1~2 天后咯血停止。对照组中无一例出现排尿障碍。有 12 例出现喉痉挛,局部吸入

沙丁胺醇气雾剂 3 吸并静滴甲基强的松龙 40 mg 10 分钟后缓解。支气管哮喘发作 26 例,经处理后缓解。咽部疼痛 30 例,剧烈咳嗽 100 例。术中因恐惧或窒息感不能完成检查者 20 例。

3 讨论

自 20 世纪 60 年代纤维支气管镜问世以来,已被广泛应用于成人呼吸系统疾病的诊断与治疗^[5,6],在纤维支气管镜检查时,患者常常出现剧烈呛咳、屏气、躁动等,甚至拒绝继续检查,导致检查失败^[7]。因此,如何能够寻找一种安全、可靠、舒适的支

气管镜检查方法,成为临床医师追求的目标。近年来已经有一些不同的静脉全麻药物组合在成人无痛纤维支气管镜检查应用的报道^[9],但是大样本量的无痛纤维支气管镜检查鲜有报道。自今年3月以来,我院呼吸科在西北地区率先开展了300例无痛支气管镜检查,在检查过程中与普通支气管镜进行对比,并进行经验和教训总结如下:

观察组300例均完成了检查,检查结束后迅速从麻醉中复苏,对检查过程无痛苦记忆,术后不良反应少,无一例出现严重并发症。在与对照组的对比中,两组患者舒张压的变化差异无统计学意义,但观察组的收缩压、心率、血氧饱和度更为稳定,显示对循环和呼吸功能的影响更小。

但值得注意的是,在我们对300例无痛支气管镜的临床研究中,发现观察组患者术中咯血相对较少,与麻醉药物使用后呼吸平稳、患者更少呛咳有关,但术后咯血患者较多,这与以往报道不^[9,10],术后咯血患者均为女性,体型较瘦弱,推测可能因咽腔狭小而软性气管插管时损伤有关,故应注意麻醉师需熟练操作。同时由于无痛支气管镜检查时,手术和麻醉共用一个气道,手术复杂,术中并发症高,应由高年资的麻醉医师负责,备好抢救措施,如不同型号的气管导管、喉罩、三通管等。另外,在男性前列腺增生患者时,需注意术后尿潴留可能性。

总之,我们西北地区进行了300例无痛支气管镜检查,证实为一种安全、有效、舒适的检查方式,需要经验丰富的麻醉医师配合,并准备好相应的抢救药物和仪器,可以让患者能在睡眠、安静状态下完成支气管镜检查,值得临床推广应用。

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