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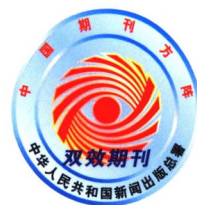
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计学意义($P > 0.05$)。然而, Isoflurane 组患者 T_2 、 T_3 时的血清 IL-6, IL-10 水平均高于 TIVA 组。组内比较, 与 T_0 时的血清 IL-6 或 IL-10 水平比较, 2 组患者插管后 2 h 和术后 24 h 的血清 IL-6 和 IL-10 水平均显著升高($P < 0.05$)。见表 3。

TIVA 组患者平均住院时间为(10.5 ± 7.5)天, 异氟烷组则为(10.1 ± 2.5)天。异氟烷组 1 例患者术后 15 天死亡。

表 3 2 组患者 IL-6, IL-10 水平比较/(pg · ml⁻¹)

指标	TIVA	Isoflurane
IL-6		
T_0	3.2(1.6 ~ 20)	3.1(1.2 ~ 17)
T_1	3.2(1.3 ~ 23)	3.2(1.2 ~ 21)
T_2	102(46 ~ 157) *	108(43 ~ 155) *
T_3	88(5.7 ~ 349) *	101(24 ~ 328) *
IL-10		
T_0	4.6(1.8 ~ 9.8)	4.3(2 ~ 42)
T_1	5.2(2.5 ~ 9.4)	7.2(2 ~ 41)
T_2	47(11 ~ 96) *	45(25 ~ 86) *
T_3	14(4.4 ~ 38) *	22(9.3 ~ 223) *

注: * 为与本组 T_0 比较, $P < 0.05$ 。

3 讨论

已有研究表明麻醉药物能影响患者术后促炎和抗炎因子的平衡, 并影响肿瘤细胞行为和肿瘤生长, 进而影响癌症患者术后的长期结局。在临床浓度下, 与其它静脉麻醉药比较, 丙泊酚对 NK 细胞和淋巴细胞活性影响较小; 此外, 丙泊酚还具有抗炎, 抗肿瘤, 抑制环氧合酶(COX-2)活性等作用。挥发性麻醉药异氟烷和七氟烷可抑制肿瘤细胞生长, 其作用呈时间依赖性。

IL-6 和 IL-10 对肿瘤的进展有重要作用。IL-6 可促进肿瘤生长, 影响肿瘤细胞分化, 保护肿瘤细胞免于凋亡; 而 IL-10 抑制促炎细胞因子的合成和提高抗肿瘤免疫功能。本研究中, 2 组患者在 T_0 、 T_1 、 T_2 、 T_3 时血清 IL-6, IL-10 水平差异无统计学意义($P > 0.05$); TIVA 组和异氟烷组患者插管后 2 h(T_2) 和术后 24 h(T_3) 的血清 IL-6 和 IL-10 水平均显著高于 T_0 ($P < 0.05$)。

这与先前的研究一致^[4-5]。

我们使用自控泵静注吗啡用于患者术后止痛, 虽然已有文献报道吗啡的免疫抑制作用^[6], 基于本研究中 2 组患者麻醉期间, 术中及术后吗啡的使用量相近, 因此本研究中没有考虑吗啡对白细胞介素浓度的潜在影响。此外, 术中输血可能也会影响 IL-6, IL-8, IL-10 水平^[7]。本研究中 2 组患者间的术中失血量没有统计学差异, 从而排除了输血对 IL-6, IL-10 浓度的潜在影响。本研究随访时间为术后 24 h, 由于时间间隔短, 我们没有评估患者肿瘤复发的发生率。本研究的不足之处为随访时间短, 患者长期结局不明确, 这将是我们的下一步的研究方向。

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