

针刺风池穴对脑血流的影响

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摘要 应用经颅多普勒超声对 97 例患者进行针刺风池穴前后椎基底动脉血流速度观测,结果表明,治疗组高流速型与低流速型针刺前后血流速度比较均有显著变化($P < 0.001$),治疗组与对照组两样本针刺后比较有显著差别($P < 0.001$)。

主题词 体积描记法,阻抗/针灸效应 穴,风池

经颅多普勒超声(TCD)是近年来发展起来的一项新技术,目前主要用于临床诊断,评价大脑 Willis 环侧支循环,提供其他影像技术所检测不到的血液动力学资料。高血压和脑血管病是引起血液动力学改变的主要疾病,我们对 97 例病人进行了针刺风池穴前后椎基底动脉血流速度的测定,试图运用 TCD 技术评价针刺对脑血流的影响。

1 一般资料

1.1 观察对象:治疗组 82 例,其中男性 51 例,女性 31 例。年龄最小 40 岁,最大 78 岁,其中 40~49 岁 16 例,50~59 岁 21 例,60~69 岁 27 例,70 岁以上 18 例。脑梗塞 39 例,脑出血 6 例,高血压 12 例,颈椎病 9 例,冠心病 6 例,糖尿病 4 例,另有头痛头晕 6 例。症状以头晕为主,兼有头痛、肢麻、半身不遂、语言不利等。

对照组 15 例,男性 8 例,女性 7 例。年龄 44~57 岁,有头晕头痛症状,无器质性疾病,无病理性脑血流速改变。

1.2 观测方法:针刺双侧风池穴,对高流速型患者采用强刺激手法,对低流速患者采用弱刺激手法,对照组用平补平泻手法。留针 15~20 分钟。

应用美国 MEDASONICS/CDS 经颅彩色多普勒脑血流分析仪,探头频率为 2MHz,由枕窗探测,并记录针刺前后椎基底动脉收缩期最

大峰值血流速度(V_p),舒张期末血流速度(V_d),平均血流速度(V_m),搏动指数(PI),血管阻力系数(RI)。

1.3 诊断标准:以国内测定的正常人椎基底动脉收缩峰值血流速度为标准:40 岁以上椎动脉血流速度 45 ± 5 cm/秒,基底动脉血流速 55 ± 5 cm/秒。高于正常上限 10cm/秒为血流速增高,低于正常下限 5cm/秒为血流速减低。

1.4 疗效判断标准:以高/低血流速每降低/升高 10cm/秒为显效;降低/升高 5cm/秒为有效;降低/升高 5cm/秒以下为无效;针刺后血流速趋向异常变化为逆反应。

2 观测结果

2.1 针刺前血流速度分析:治疗组 82 例共 180 条血流速异常的椎基底动脉血管,其中高流速血管 80 条,低流速血管 100 条。血流速增高的血管中,椎动脉 49 条,增高幅度为 64~179cm/秒,其中增高 90cm/秒以上 11 条;基底动脉 31 条,增高幅度为 71~178cm/秒,其中 90cm/秒以上 15 例。血流速减低的血管中,椎动脉 67 条,减低幅度为 16~34cm/秒;基底动脉 33 条,减低幅度为 21~42cm/秒,其中 35cm/秒以下 17 条。

对照组 15 例,45 条椎基底动脉血流速均在正常范围,椎动脉血流速度 38~54cm/秒,基底动脉血流速度 46~68cm/秒。

2.2 针刺后血流速度分析:针刺后高流速血管 80 条中,血流速降低 5cm/秒以上 62 条,其中降低 10cm/秒以上 32 条,降低 20cm/秒以上 14 条,降低最大数值椎基底动脉分别为 46cm/秒、48cm/秒,血流速无变化血管 13 条,逆反应血管 5 条。低流速血管 100 条中,血流速升高 5cm/秒以上 43 条,其中升高 10cm/秒以上 13 条,升高 20cm/秒以上 4 条,升高最大数值椎基底动脉分别为 25cm/秒、36cm/秒,血流速无

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变化血管 44 条,逆反应血管 13 条。随着收缩期血流速的增减,舒张期及平均血流速度也有相应的改变,由于参数低,变化幅度不如收缩期明显。血管搏动指数和阻力系数的变化仅在 0.02 左右。

针刺后治疗组高流速型针刺显效率椎基底

表 1 针刺风池穴对异常脑血流速的疗效

	高流速		低流速	
	椎动脉(49 条)	基底动脉(31 条)	椎动脉(67 条)	基底动脉(33 条)
显效	28(57.1)	18(58.0)	9(13.4)	8(24.2)
有效	9(18.4)	7(22.6)	19(28.4)	7(21.2)
无效	12(24.5)	6(19.4)	39(58.2)	18(54.6)

注:表中数据为血管条数(%)

对照组 45 条血管,针刺后血流速测值均在正常范围内变化,其中血流速升高/降低 5cm/秒以上各 5 条血管,变化幅度—9~9cm/秒,血流速变化在 5cm/秒以下有 35 条血管,占总数 77.7%。

2.3 针刺前后两组血流速的比较:治疗组无论高流速型还是低流速型,针刺前后自身血流速比较均有显著性差别($P<0.001$),而对照组针刺前后血流速比较无明显差别($P>0.05$)。治疗组与对照组两样本均数比较,治疗组效果显著高于对照组($P<0.001$)。治疗后高流速平均下降 12cm/秒,低流速平均上升 4.5cm/秒。

表 2 针刺前后椎基底动脉收缩峰值血流速度比较

	治疗组		对照组 (45 例)
	高流速型(80 例)	低流速型(100 例)	
椎动脉	84.7~72.0 11.8±1.5*	28.7~32.3 3.7±0.7*	44.2~43.5 -0.2±0.7
基底动脉	95.4~83.0 12.7±2.1*	34.6~40.8 6.1±1.4*	54.9~55.1 0.8±1.1

注:表中数据上行为治疗前均值~治疗后均值,下行为治疗前后均差值±标准误

* 治疗组两型针刺前后自身对照 $P<0.001$

3 讨论

经颅多普勒超声(TCD)是一种无创性检查,灵敏度高,重复性强,能够提供脑血流频谱形态、流速、血管张力等数值。笔者利用 TCD 作为观测针刺疗效的指标是一种新的尝试。通过针刺风池穴的实验表明,TCD 测定是评价和

动脉分别为 57.1%、58.0%,总有效率分别为 75.3%、80.0%。低流速型针刺显效率椎基底动脉分别为 13.4%、24.0%,总有效率分别为 42.0%、45.5%。高流速型针刺显效率和有效率均高于低流速型,可见高流速型针刺即刻效果比低流速型好,详见表 1。

研究针刺对脑血流疗效较为敏感的指标。

血流速度反映动脉管腔的大小。脑血管痉挛和轻、中度脑动脉狭窄表现为脑血流速度增高,重度脑动脉狭窄($>65\%$)及脑供血不足表现为脑血流速度减低。针刺对高流速型较低流速型疗效好,说明针刺对脑血管的解痉扩张作用更迅速、更明显,对严重的脑动脉硬化、狭窄及脑供血不足即刻疗效相对较差。

针刺对治疗组的高流速型有降低血流速的作用,对低流速型有提高血流速的作用,可见针刺对脑血管的收缩与舒张有双向调节作用。

针刺疗效与针刺手法有较密切的关系。当针刺患者风池穴时,用强刺激手法能够使过高的血流速降低,而轻刺激往往效果不理想。对于低血流速则需用弱刺激手法,候其正气,如用强刺激反而不利。由此证明针刺手法可以改善脑动脉的弹性和紧张度,通过不同的补泻手法,起到抑制或兴奋作用,以调节脑血管的张力,改善患者的脑部血液循环。

风池穴属足少阳胆经,其穴名指风邪易于留恋和治风之所当取之处。根据近部取穴的原则,风池穴位于项后,就近于头部,可以调整头部的阴阳气血。该穴位浅层有枕神经与枕动脉,深层有椎动脉,两动脉分支在肌层和硬脑膜处相吻合,刺激该处穴位可以通过动脉系统肾上腺素与胆碱能神经纤维的调节,引起脑血管的收缩与舒张,使椎基底动脉血流速度发生变化。

ABSTRACTS OF ORIGINAL ARTICLES

Influence of Acupuncturing Fengchi - Point on Cerebral Blood Flowing.

Yuan Xiaojun, Hao Xishu, Lai Zhongping, et al

By using percerebral Dopler Ultrasonic exam. observation was made on the changes of blood flowing in basilar artery before and after acupuncturing of Fengchi points in 97 cases. Results showed that there was significant changes in blood flowing velocity before and after acupuncturing in the treating group of rapid blood flowing and slow blood flowing types ($P < 0.001$). And the significance of samples from the treating group and controlled group before and after acupuncturing was also significant ($P < 0.001$).

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Key Words: plethysmography/impedance acupuncture effect/point, Fengchi

(Original article on page 285)

Action of Remedies of Supporting Resistance and Relieving Blood Stasis on Metastasis of Post-operative Gastric Cancer and Its Influence on Ornithine Decarboxylase.

Bu Ping

Thirty-two cases of post-operative cancer of stomach were treated with remedies of supporting resistance and relieving stasis with another group treated with western drugs for comparison. Results revealed that the metastatic rate had been greatly decreased, also the content of ornithine decarboxylase was markedly dropped, suggesting that lowering rate of post-operative metastasis might be related to the activity of ornithine decarboxylase.

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Key Words: cancer of stomach/surgical operation

(Original article on page 290)

One-hundred Fifty Cases of Chronic Brucellosis Treated with Differential Diagnosis of Syndromes.

Sheng Yongfu, Hu Suhua

Four types, including deficiencies of Qi-blood, Yin-deficiency of Liver-kidney, blood-stasis and damp-heat, were differentiated in 150 cases of chronic brucellosis for treatment with respective traditional materia medica. 59 cases were cured. 54 case basically

cured. 25 cases mitigated and 12 cases ineffective. the total effective rate being 92 %.

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Key Words: Brucella/TCM therapy Treatment based on differentiation of syndromes

(Original article on page 292)

Diagnosis and Treatment of 52 Cases of Protracted Pneumonia in Children.

Bao Jing

Since antibiotic therapy is not satisfactory to children's protracted pneumonia, the patients used to pursue TCM therapy. 52 cases of such patients were treated by this author since 1983. Results revealed that the treating principle of dispersing and clearing method along with tonification as core therapy was satisfactory to elevate the therapeutic effect. The patients were differentiated into 4 types, lung-heat with deficient fluid, failure of spleen (earth) to support lung (metal), weakness of Ying and defensive levels, and stagnant pathogens due to Qi-deficiency.

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Key Words: Protracted pneumonia/TCM therapy treatment based on differentiation of syndromes

(Original article on page 294)

Influence of Semen Raphani on Tonic Action of Radix Ginseng.

Wu Xinghe, Guan Yunli, Zhou Dehe, et al

In ancient recipe books and according to ancient physicians, it was said that Semen Raphani might neutralize the tonic action of Radix Ginseng, and it was also a folk belief that raddish and Semen Raphani were tabooed when administering Radix Ginseng. In our experiments, results showed that Radix Ginseng yielded marked actions of anti-fatigue, anti-anoxia and anti-irritation in mice, mean while no influence can be observed when administering Semen Raphani at the same time in such experiments.

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Key Words: Radix Ginseng/ pharmacology Semen Raphani/pharmacology compatibility of drugs

(Original article on page 300)