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Study of the pathological changes of chronically hypoperfused brain in rats

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Abstract Objective: To study the histopathological and ultrastructural changes of the chronically hypoperfused brain in the rats. Methods: The rat model of chronically hypoperfused brain was established by the ligation of both the carotid arteries. The histopathological and ultrastructural changes of the brain were observed with optical microscopy and electron microscopy respectively. Results: After chronical hypoperfusion of the brain, there was denaturation, pyknosis and degeneration of the neurons in the hippocampus. Damages of the nerve fibers and myelin sheath were found in the white matter under the cortical layer. The proliferation of gliacytes generally existed to form glial nodes. There was accumulation of vesicles in the dendrites and thickening of the postdendritic membrane. The changes mentioned above became more sever along with the elapse of time and were ameliorated after the administration of cyclosporin A. Conclusion: The degenerative changes resulting from chronic hypoperfusion of the brain are the pathological basis of the lowering of the recognition function. Immunosuppression agent cyclosporin A exerts definite therapeutic effects on this disorder.

Key words hypoperfusion; brain; pathological change; rat

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肺原发性混合癌 7例临床病理分析

Clinical pathologic analysis of pulmonary primary mixed carcinoma in 7 cases

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肺原发性混合癌(Pulmonary primary mixed carcinoma, PPMC)较少见,现收集 7例报告如下。

1 材料与方法

本组 7例 PPMC均经胸外手术切除,10%福尔马林液固定,在肿瘤的不同部位取材,常规石蜡切片、HE染色,光镜观察,分析结果。每例切片数 7~10片,经两位病理医师观察后诊断。并依据日本肺癌组织分类标准进行[1]。

2 结果

临床资料:男 5例,女 2例;年龄 29~64岁,平均 49.57岁。最短病程 20 d,最长达 1年,平均 3.5个月,多为 1~2个月之间。每例均有刺激性干咳、咳痰及痰中带血等,部分患者伴胸痛及胸背部胀痛。7例均经胸片及 CT等检查以"肺部恶性肿瘤"收入院。肿瘤位于左肺者 4例、右肺者 3例。

肉眼观察:肿瘤呈灰白色,边界较清楚;切面灰白色,间有灰褐色区,部分有坏死;质地细嫩、质中或质稍硬。瘤体大小为 3.5 cm×2.8 cm×2.6 cm~6.5 cm×5.5 cm×5.5 cm。7例中有 5例共 12枚支气管旁及肺门的淋巴结有癌转移,另有肺门旁转移性癌结节 1枚。

组织学观察:① 肺泡细胞癌合并鳞癌者 3例。镜检发现每例癌组织均呈双重混合性排列或分布,有的区域二者间相互混杂。肺泡细胞癌区的癌细胞呈高柱状、低柱状或立方状,沿肺泡壁单层或多层排列,胞浆嗜酸性,核异型性明显,核分裂像可见,肺泡腔内可见有坏死的癌细胞及粉染的粘液。鳞癌区之癌细胞呈典型的巢团状排列,2例癌细胞异型性明显,间桥消失,核分裂像较多见,且癌巢内无明显角化珠;1例癌巢中可见癌珠及角化不全的癌细胞。② 鳞癌合并小细胞癌 1例:此例双重混合癌中,小细胞癌及鳞癌组织均很明确,两种癌成份混杂排列,且易于识别。部分区域两种细胞似有移行或过渡。鳞癌细胞区呈巢状排列,癌巢中亦可见不全角化的癌细胞,癌细胞胞浆丰

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Study of SCF expression in keratonicytes of segmental vitiligo lesions

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Abstract **Objective:** To study the expression of stem cell factor (SCF) in the keratinocytes (KCs) in the lesions of segmental vitiligo. **Methods:** *In situ* hybridization with a human SCF cDNA probe and immunohistochemistry were employed to study the lesions of 8 active and 9 stable cases of segmental vitiligo. **Results:** It was found that the expression of SCF in the KCs of the lesions of segmental vitiligo was more intense in the active stage of the disease than in the stable stage and no significant difference was found between the expressions in the normal KCs and the stable KCs. **Conclusion:** Normal expression of SCF in the stable lesions of segmental vitiligo provides experimental evidence of longtime survival of autotransplanted melanocytes when they are used to treat segmental vitiligo. The intense expression of SCF in KCs in the active stage indicates the participation of SCF in the pathogenesis of the disease.

Key words segmental vitiligo; melanocyte; keratinocyte; stem cell factor (SCF)

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富,异型性明显,细胞间桥消失,核分裂像多见。小细胞癌区呈弥漫分布,细胞体积小,胞浆少,呈圆形或卵圆形,核小浓染。③肺泡细胞癌合并腺癌 2例: 2例均具有典型的肺泡细胞癌及腺癌的双重混合。腺癌区之异型的癌细胞构成大小不等的腺管状或筛状结构,腔内有分泌物,癌细胞排列紊乱,异型性明显,易见病理性核分裂像;部分区域癌细胞大而透明,呈实体巢状不规则排列,癌细胞多边形,轮廓清楚,核小、深染;部分区域见片状坏死。④肺泡细胞癌合并腺鳞癌 1例:此例不仅有典型的肺泡细胞癌成份,也见有明确的腺癌及鳞癌结构,构成了三重混合性肺癌。除肺泡细胞癌成份稍多外,腺癌及鳞癌成份大致相等。癌组织呈不规则乳头状、腺管样及典型的肺泡细胞癌结构,浸润性生长;部分癌细胞呈不规则巢状及不典型的筛腺状结构,细胞异型性明显,病理性核分裂像易见。

3 讨论

在肺的同一原发性癌肿内出现了两种或两种以上不同细胞类型癌的混合存在,称之为肺原发性混合癌。这是肺癌中一类较少见的组织类型。这类混合性癌的临床症状与常见癌相似。但 PPMC的侵袭力更强、早期即可发生转移,进展迅速。本组 7例患者的平均病程为 3.5个月,多在 1~2个月内病情快速进展,症状明显,且多数患者出现肺门区淋巴结内癌转移。说明本组病例的临床表现与文献报道的 PPMC特点基本相符,并提示这是一种预后较差的低分化混合癌。

目前,对于 PPMC的诊断尚没有统一标准,有关文献依据日本肺癌组织分类讨论委员会 1978年提出的分类标准,规定混合癌中任何一种恶性组织成份须占全部肿瘤成分的 20%以上方能诊断成立。本组 7例均依据此规定,从多部位取材,进行光镜观察得出的病理诊断是可信的。国外文献报告肺原发性混合癌的发生率为 5%~10%,国内报告一组 PPMC的发生率分别为 3.4%[3]~1.96%,且三重混合癌发生率 0.3%[2]。结合本组资料,这表明 PPMC中不仅以双重混合癌多见,且癌细胞的类型混合也是多种多样的。

近年来的研究发现肺癌细胞所呈现的双向或多向分化构成了肺癌的不同组织学类型与肺癌细胞不同的表型分化有关,且发现肺癌细胞可能来源于共同的干细胞,并具备了多能分化的潜能和异质性[4],既使在同一组织学类型的肺癌中也常含有其他表型的分化。这些表型分化可分为表皮样分化、腺分化、复合腺-表皮样分化及神经内分泌分化等[4]。本组 7例 PPMC呈现双重或多重类型肺癌细胞的混合存在于同一瘤体内,也完全反映了肺癌细胞的多能分化和异质性之特征。

关键词 肺原发性混合癌;临床病理分析
中图法分类号 R734.2 文献标识码 B

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