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The use of mushroom glucans and proteoglycans in cancer treatment.

Kidd PM.

Abstract

Immunocuticals can be considered as substances having immunotherapeutic efficacy when taken orally. More than 50 mushroom species have yielded potential immunocuticals that exhibit anticancer activity in vitro or in animal models and of these, six have been investigated in human cancers. All are non-toxic and very well tolerated. Lentinan and schizophyllan have little oral activity. Active Hexose Correlated Compound (AHCC) is poorly defined but has shown early clinical promise. Maitake D-Fraction has limited proof of clinical efficacy to date, but controlled research is underway. Two proteoglycans from *Coriolus versicolor* - PSK (Polysaccharide-K) and PSP (Polysaccharide-Peptide - have demonstrated the most promise. In Japanese trials since 1970, PSK significantly extended survival at five years or beyond in cancers of the stomach, colon-rectum, esophagus, nasopharynx, and lung (non-small cell types), and in a HLA B40-positive breast cancer subset. PSP was subjected to Phase II and Phase III trials in China. In double-blind trials, PSP significantly extended five-year survival in esophageal cancer. PSP significantly improved quality of life, provided substantial pain relief, and enhanced immune status in 70-97 percent of patients with cancers of the stomach, esophagus, lung, ovary, and cervix. PSK and PSP boosted immune cell production, ameliorated chemotherapy symptoms, and enhanced tumor infiltration by dendritic and cytotoxic T-cells. Their extremely high tolerability, proven benefits to survival and quality of life, and compatibility with chemotherapy and radiation therapy makes them well suited for cancer management regimens.

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是項研究報告於美國國家醫學圖書館的“互助醫學療法”2000年刊物發表。

研究人員 Kidd 發表藥用菇菌類中的聚葡萄糖 (glucans) 及蛋白多醣 (proteoglycans) 用於癌症治療的研究。

現時已知約50種藥用菇菌類可被用於免疫治療 (immunotherapy) 及在試管及動物的實驗中展示抗癌功能，更有6種藥用菇菌類在人類身體上實驗。

雲芝中的兩種蛋白多醣 PSK 及 PSP 的抗癌功效更為顯著。日本的醫學界從1970年起不斷進行對雲芝PSK的研究。報告

指出PSK助延長多類癌症病人的壽命達5年或更久：包括胃、直腸、食道、鼻咽、肺(非微小細胞類)及HLA B40 正類乳腺癌。

此外，雲芝另一聚醣PSP在中國醫學界已被進行第二及第三階段的臨床測試，包括在動物及人類的研究。有一些雙盲(double-blind trials)的研究項目發現雲芝PSP能顯著延長食道癌病人的壽命多達5年。雲芝PSP更能助70-97%的胃、食道、肺、卵巢及子宮頸癌病人改善生活質素，助減輕痛症及平衡免疫系統。

Kidd 的研究報告亦提出雲芝 PSK 及 PSP 能增加人體免疫細胞之生長，助減輕化療帶來的副作用和減慢腫瘤的生長。