

Clinical Investigation in Improved Quality of Life with Medroxyprogesterone Acetate in Patients with Advanced Lung Cancer

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Abstract: Objective. This study was to investigate the effect of medroxyprogesterone acetate (MPA) in 50 cases with advanced lung cancer. **Methods.** 98 cases with advanced lung cancer were randomly divided into two groups, 50 cases of the therapeutic group undergoing routine chemotherapy plus taking MPA, and 48 cases of the controlled group undertaking routine chemotherapy alone. **Results.** In the therapeutic group, 78.0% cases showed improvement of appetite, 60.5% cases gained weight, and the score of Karnofsky rose 59.1% ($P < 0.01$). **Conclusion.** MPA has beneficial effects to improve quality of life in patients with advanced lung cancer while its side effect is not obvious. [Life Science Journal. 2005;2(1):27-29] (ISSN: 1097-8135).

Keywords: MPA; chemotherapy; lung neoplasm; quality of life

1 Introduction

Dystrophia and increasing weight loss are common complications of advanced cancer, which are aggregated by Nausea, vomiting and Anorexia induced by chemotherapy, usually they constitute one of the main causes that prevent patients from continuing chemotherapy. To reduce the side effects of chemotherapy, improving quality of life in patients of advanced cancer during chemotherapy is one important aspect in present clinical investigation of cancer. From late 1980s, except intestinal and extraintestinal high nutrition and other supportive therapy can improve weight of patients with cancer, the synthesized drug of progesterone—Medroxyprogesterone Acetate (MPA) can remedy Anorexia and weight loss, so indirectly improved the effects of anti-tumor therapy. Now reports as follows from the results of clinically randomized investigation of our department in recent years.

2 Materials and Methods

2.1 Clinical data

98 patients with advanced lung cancer, from October 1998 to May 2002, were all diagnosed by histodiagnosis. There were 53 males and 45 females, the median age was 60.5 years old (From 17 to 78 years old), in which there were 32 pa-

tients with small cell lung cancer and 66 with non small cell lung cancer; 21 patients in stage III and 77 in stage IV. The average Karnofsky scores were 62.5 in the therapeutic group and 64.2 in the controlled group. The standards by which patients can be chosen were: ① not accepting hormone therapy; ② without history of hypertension diabetes and thrombosis; ③ not accepting enteral or parenteral high nutrition (including transfusion of blood and some albuminoid biologic preparation); ④ with normal function of liver, kidney and blood routine.

2.2 Methods

Both chemotherapy schemes used cisplatin plus etoposide for two cycles at least. Patients in the therapeutic group began to have MPA of 500 mg twice a day, for 14 days continually when routine chemotherapy started. Patients in the controlled group were treated by routine chemotherapy plus usual supportive therapy. Improvement of appetite, changes of weight and changes of Karnofsky scores after treatment were investigated separately.

2.3 Statistic analysis

Statistic analysis adopted chi-square test (χ^2 -test).

3 Results

3.1 The amount of food that patients consumed and weight

The standard to evaluate the appetite of pa-

tients is: it can be divided into three groups on the basis of changes of the amount of food that patients consumed everyday after treatment. **Improvement:** the amount improved no less than 0.1 kg. **No change:** the amount change less than 0.1 kg. **Reduction:** the amount reduces no less than 0.1 kg.

The result shows that appetite of patients began to improve after using MPA for 2 to 3 days. In which, the patients in the therapeutic group were 78.0% (39/50), and the patients in the controlled group were 10.4 (5/48). There was significance of difference by comparing the two groups (Table 1).

Table 1. Changes of appetite and weight in both groups

Group	Cases	Changes of appetite				Changes of weight			
		Improvement (cases)	Reduction (cases)	No change (cases)	Rate of effectiveness (%)	Improvement (cases)	Reduction (cases)	No change (cases)	Rate of effective (%)
The therapeutic group	50	39	2	9	78.0	32	3	15	64.0
The controlled group	48	5	31	12	10.4	6	3	39	12.5

3.2 Changes of Karnofsky score

Changes of Karnofsky scores can be classified into: improvement, the Karnofsky scores after therapy increased no less than 10; no change, the scores changed less than 10; reduction, the scores reduced on less than 10. The scores of Karnofsky in the therapeutic group increased in 29 patients, which is 58.0% (29/50). However the scores of Karnofsky increased in 11 patients in the controlled group, which is 22.92% (11/48). There was significance of difference by comparing both groups

($P < 0.01$) (Table 2).

3.3 Bad effect

Among 50 patients that took MPA, four patients (8 percent) got slightly depressed edema and recovered after taking uretica and three patients' (6 percent) blood glucose increased. Among 23 female patients, 2 patients have vagina hemorrhage after stopping taking MPA. Vascular obstructive disease, liver and renal function damage couldn't be found.

Table 2. Changes of scores of Karnofsky in both groups

Group	Cases	Scores reducing	Scores no change	Increasing 10	Increasing 20	Rate of effectiveness (%)
The therapeutic group	50	4	17	18	11	58.0
The controlled group	48	12	25	9	2	22.92

4 Discussion

Anorexia, weight loss, strength loss, hypoalbuminemia and so on are main factors that affect quality of life of advanced cancer patients. As a major therapy to conquer advanced cancer, chemotherapy is hindered because that myelosuppression and gastrointestinal tract toxicity caused by chemotherapy can reduce furtherly patient's quality of life. MPA is a kind of synthetic progestogen that can promote albumin assimilation. It is indicated in clinical study in recent 10 years that large dose of MPA can not only improve appetite, raise weight

and promote albumin assimilation, but also palliate cancer pain, reduce toxicity and side effects that chemotherapeutic agents generate on marrow and gastrointestinal tracts and consequently develop quality of life during chemotherapy and tolerance to it completely. It is indicated that from 30 percent to 100 percent advanced cancer patients get negative nitrogen balance while MPA can improve appetite, raise absorption to protein, heat and sodium, keep positive nitrogen balance. In the therapeutic group, 39 (78.0 percent) patients showed improvement of appetite, 32 (60.5 percent) patients gained weight and 29 (58.0 percent) patients' score of Karnofsky rose. Living quality of

therapeutic group improved more than control group significantly ($P < 0.01$).

To sum up, cachectic syndrome like anorexia related with cancer and toxicity caused by chemotherapy are important factors that affects living quality of advanced cancer patients. Compared with singly using enteral feeding, parenteral hyperalimentation or other heteropathies that can improve advanced cancer patients' nutritional state and toxicity caused by chemotherapy, MPA can not only stimulate appetite, raise weight, promote albumin assimilation, raise strength and spiritual state but also be characterized by convenient use, no pain and long term use. So that, MPA can not only treat enzyme sensitive tumor but also improve quality of life of cancer patients during chemotherapy completely if it was accurately and reasonably taken by intermediate and advanced cancer patients. So it is an effective medicine worthy spreading to improve quality of life advanced lung cancer patients.

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