
The increase of the prostatic acid phosphatase value in the prostatic cancer patients has been published by many authors. Enzyme assay method for the measurement of PAP had been used. But the sensitivity is very low. The newly developed RIA-PAP has utilized since the end of 1978 in our hospital. The method: PAP-RIA kit of Daiichi Selyaku is used. The studied group of patient is divided largely three groups: prostatic cancer of stage A and B, prostatic cancer of stage C and D, and non cancer group of prostatitis and prostatic hypertrophy. Results: PAP value of stage C and D group is always more than 2.0 ng/ml. The decrease of PAP value was occurred in the patients who responded well for the treatment. But stage A and B group value didn't always visualize more than 2.0 ng/ml. The non cancer group value is usually less than 2.0 ng/ml. Those facts might be suggested the PAP value measured with RIA method will be used for the indication of the prognosis and the recurrence detection. PAP value measured with RIA system is reliable and useful for the clinical application. Conclusion: Before the treatment of prostatic cancer the RIA-PAP should be measured. And the prognosis results must be checked with the PAP. But our clinical study still now is going on to evaluate the exact data of clinical application.


A determination of prostatic acid phosphatase in serum has been used as specific tumor marker for diagnosis of prostatic cancer and for observation after treatment. However, methods hitherto to measure enzyme activity have problems in its specificity and sensitivity, and are not satisfactory. We have studied two kinds of RIA kit and also compared these kits with the Kind-King method and the counter immunoelectrophoresis method. The RIA gave 75% positive results with 16 patients having prostatic cancer; the Kind-King method and the CIEP method gave 69% positive results, respectively. With 9 patients having prostatic hypertrophy, the RIA and the CIEP method gave all negative results, but the Kind-King method gave one positive result. Based on the results of serum PAP, prostatic cancer can be distinguished from prostatic hypertrophy. In the cases of PAP concentration above 3.0 ng/ml, prostatic cancer can be suspected. When prostatic cancer is classified to its progressing stages, a tendency of increasing PAP values has been found as the stage progresses. Thus, PAP RIA is superior to the Kind-King and the CIEP method in sensitivity and accuracy, and this that PAP will further increase its significance as tumor marker.