

INTENSITY OF PAIN SYNDROME IN PATIENTS WITH SECONDARY HYPERPARATHYROIDISM ON PROGRAM HEMODIALYSIS IN VARIOUS AGE GROUPS

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OBJECTIVES

Hyperparathyroidism is a typical complication in patients with chronic kidney disease 5 dialysis (CKD5D) stage . It has a variety of severe clinical and laboratory manifestations. Pain is among the symptoms of bone lesions, which limits the mobility of the patients, worsening their quality of life.

Aims: To estimate the relation between the degree of severity of pain syndrome with the content of parathyroid hormone in the blood of patients with CKD stage 5 in various age groups receiving dialysis therapy.

METHODS

208 patients with CKD stage 5 receiving renal replacement therapy by hemodialysis program were examined. Their age ranged from 22 to 74 years, males accounted for - 51%, females - 49%. All patients underwent determination of intact parathyroid hormone (iPTH) in the blood by immunochemiluminiscent analysis method. The level of PTH distinguished patients with optimal (130-300 pg/ ml) and moderate high (300 - 800 pg/mL) and very high (more than 800 pg/ml) levels of iPTH. Patients were divided into two groups according to their age. The first group consisted of 160 patients younger than 65 years (77 % of all patients). The second group consisted of 48 patients elder than 65 years (23 %).Patients were interviewed on the proposed standard questionnaire to assess the presence and severity of pain. Graduation degree of pain from "no pain" to "unbearable pain" corresponding to a score on a scale ten-digit was proposed in the questionnaire. The point of a score on a scale ≥ 3 was regarded as the presence of pain syndrome. The obtained data were analyzed using nonparametric statistical methods.

Table1. Pain syndrome in patients younger than 65 years in relation with iPTH level.

	iPTH level 130-300 pg/ ml	iPTH level 300-800 pg/ ml	iPTH level more then 800 pg/ ml
PAIN SYNDROME+	2 (average pain level by 10 point scale +3)	32 (average pain level by 10 point scale +5.8)	36 (average pain level by 10 point scale +8.1)
PAIN SYNDROME -	59	28	3

Table1. Pain syndrome in patients elder than 65 years in relation with iPTH level.

	iPTH level 130-300 pg/ ml	iPTH level 300-800 pg/ ml	iPTH level more then pg/ ml
PAIN SYNDROME+	5 (average pain level by 10 point scale +4)	6 (average pain level by 10 point scale +6.1)	3 (average pain level by 10 point scale +8.5)
PAIN SYNDROME -	32	2	0

RESULTS

The level of iPTH 130-300 pg/ml was observed only in 61 patients (39 %) in the first group. Increased iPTH more than 300 pg/ml was determined in 99 patients - 61 % of the group (60 of them had iPTH level 300-800 pg/ml; 39 - more than 800 pg/ml). There was optimal iPTH level in 37 of 48 patients aged over 65 years (77%). Only 11 patients (23%) showed the increase of iPTH level (8 patients - 300-800 pg/ml; 3 patients - more than 800 pg/ml). The distribution of pain syndrome in relation with iPTH level is shown in Table 1 (the first group of patients).The distribution of pain syndrome in relation with iPTH level is shown in Table 1 (the second group of patients).

CONCLUSIONS

It was revealed that the increase of intact PTH level more than 300 pg/ml (especially more than 800 pg /m) affected on frequency and severity of pain syndrome in patients of the first group. ($\chi^2 \geq 10.83, p < 0.001$). In the group of patients elder than 65 years pain syndrome was reported in patients with normal, moderate and significant increased iPTH. The increased iPTH level more than 300 pg/ml affects on frequency and severity of pain syndrome in this group ($p < 0.05$), with no relation revealed between pain syndrome and the moderate and significant increase of iPTH ($p > 0.05$). In all groups Pearsons coefficient showed strong connection of properties.

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