

Radiosynoviortesis with suspension [32p] chromic phosphate Cuban.



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OBJECTIVES

The aim of this study was to assess the safety and efficacy of applied our locally produced suspension chromic phosphate (CENTIS, Havana, Cuba) in the radiosynoviorthesis of joints in hemophilic patients suffering from chronic synovitis.

METHODS

Evaluations were made at one month, six months, and one year of treatment, and the following inclusion criteria was observed: patients a diagnosis of hemophilia, history of more than tree hemorrhages into a joint within a month and evidence of synovitis by objective imaging. Patient's informed consent was obtained, 1.0 mCi of suspension chromic phosphate was injected into the affected joints (fig 1). Safety was monitored by external beta-scanning (fig 2), routine blood tests and chromosomal analysis. Efficacy was determined by analysis of the change in joint hemorrhage frequency from twelve months after the injection and clinical evaluation (state of joint involvement, pain, motility, requirements of antihemophilic factors) was registered in follow-up charts .

Figure 1. a Radioactive isotope. b) Radioactive isotope is injected into the joint using a protector syringe. c) Mobilization of the joint in order to disperse the radioisotope throughout the synovial surface. d) Immobilized for two days, and the patient advised to avoid strenuous activities.



Figure 2. a Geiger-Muller counter (LAMSE, model RM1001-CT-1.5 – 2 mg/cm²). b) Monitoring radioactive isotope distribution of the joint. c) Monitoring radioactive isotope distribution of the liver. d) Monitoring radioactive isotope distribution of the lymphatic area.



Time of procedure	Counts
At day	0.005%
At 24 hours	0.002%
7 days	0.133%
30 days	4.021%

Table 1. Follow-up of isotope distribution.

RESULTS

The 11 procedures in knees (nine patients, eight type A and one type B) with an average age of 36,3 years (range:23-59 years). One patient required repeat procedure. Before the RSV with 32P, patients were bleeding on average 10.3 per months (range 7-13, SD ± 2,2). Average post procedure bleeding frequency reduction was 0.8 (P<0.0001).Results procedures were classified according to the following criteria. Excellent results (total absence of joint bleeding) were obtained in 55.6% of knee; Good results (reduction in joint bleeding between one and three) were 33.3% of knee; Poor and fair results (reduction in joint bleeding more than four) were 11.1% of knee at the first years of follow-up. There were neither local or systemic effects, nor leakage during suspension chromic phosphate treatment. Data of isotope distribution were obtained in seven patients (Table1). By monitoring the medial and lateral aspects of the target joint, we detected a definite trend toward a uniform dispersion of the radiocolloid throughout the joint, that occurs during the first 24 hours after procedure. The follow-up evaluation demonstrated decrease pain, increase in joint motion, and less requirement and frequency of the use of antihemophilic factors. Chromosome aberrations had not found.

CONCLUSIONS

Radiosynovectomy with Cubans suspension chromic phosphate is safe and effective procedure in limiting the frequency of joint hemorrhage, decreasing pain and improving function in hemophilic patients with chronic synovitis.

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