was 13.2 µg/ml (mean control value 39.2 ± 8.3 µg/ml) (b) T4 values were always low: 1-6 µg/100ml (mean normal value 12.7 ± 3.06).(c) T3 values were between 37 and 145 ng/100ml, mean value was 102.75 (mean normal value: 229.19 ± 45.01).(d) Resin T3 uptake was always high: 53 to 74%, mean value 71% (normal: 36.3 ± 3.59.(e) Free T4 index (FTI) varied: normal in 5 cases, decreased (<2.1) in 7 cases.(f) TSH levels were normal (< 9 µU/ml)(g) T4/TBG ratio increased in 10 cases: 0.37-1.66 and was normal in 2 cases:0.34 and 0.25 (normal mean value 0.31 ± 0.05, normal range 0.21 - 0.37). In summary, 1) the incidence of the TBG deficiency was higher than reported by DUSSAULT (1/13,000).2) Severe TBG deficiency resulted in some disturbances in the measurements of thyroid hormone which might suggest hypothyroidism.3) The male predominance (11/12) and the reduced TBG level in mothers (2 families studied) were consistent with X-linked transmission.

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The mechanism of autogen drainage studied with flow volume curves.

At the annual meeting of ESPR in 1978 a new bronchial drainage technic has been presented. The method and efficiency were shown through a radiocinematographic study after a bronchography. At the present the autors studied many flow volume patterns (V̇/V) of tidal breathings, of forced vital capacity manoeuvres, of cough and compared them with V̇/V of autogen drainage to understand the mechanisms of the latter. For this purpose the cooperation was obtained from two C.F., two asthmatic and two chronic bronchorrheïc children. Systematically the pattern of autogen drainage was very comparable to a forced vital capacity manoeuvre except that it started at a lower volume, stopped at a higher volume and the highest flow of autogen drainage never reached the peak flow. It used however greatly the effort independant part of V̇/V. The V̇/V of a cough showed a peak flow even greater as in a forced vital capacity but the total volume expired was very small and many times interrupted by collapses of the airways. The authors conclude that cough is inefficient; a forced vital capacity can be efficient but is very exhausting and cannot be performed for a long period; autogen drainage is efficient and it uses the effort independant part of a forced vital manoeuvre; it can be performed even for half an hour without getting the child tired. Only the asthmatic children developped occasionnally a bronchospasm during the autogen drainage which became useless as shown by the occurence of very flat V̇/V curves.

94 N. CONSTANTSAS*, and J. PALIS*(Intr. by C. Dacou-Voutetakis). 1st Department of Pediatrics of Athens University, Athens 617, Greece. A micromethod for the determination of globin synthetic ratios (GSR).

The GSR is an absolute criterion for diagnosis, investigation, and classification of thalassemias (thal). Its wide use is prevented by the tedious, time consuming processing of the numerous fractions obtained by conventional column chromatography. Electrophoresis is simpler, but gret dilution of the "hot" globin (newly synthesized by retics) in the "cold" hemoglobin of the mature red cells, results in unreliably low radioactivity of the separated globin bands. This can be overcome only by overloading the strips which compromises good resolution. Here, we report a procedure for the preparation of globin 10^4-fold "hotter", than currently obtained with established methods, by incubating 5 µl of packed 20-70% retics (isolated at 1,500xg on a preformed Percoll-Urografin density gradient) with 30 µC of ^{3}H-(leucine + lysine + proline + histidine +phenylalanine). Microzone electrophoresis of 2-5 µg of globin in urea-EDTA-thiol buffer, saturated with borate, gives sharp, well resolved α/β/γ bands. The GSR were determined in 75 individuals, in terms of cpm; 40 controls (β/α 1.01 ± .10); 20 β-thal traits (β/α .55 ± .10); 13 cases of β-thal major (β/α .17 ± .07, γ/α .35 ± .15); 2 α-thal traits (β/α 1.69, 1.41). In terms of specific activity, these values are not practically different, γ/β GSR, however, are up to 100-fold higher. This method allows easy handling by two persons, of 24-32 samples per week, at low cost, with repetitive assays. Hence, quality control is improved, and the scope of GSR determinations is expanded in post and antenatal thal, as well as in other hematological investigations.

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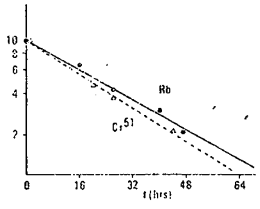
Labeling blood platelets with stable tracers.

We investigated the possibility of labeling platelets by stable tracers. The concentration of the tracers was estimated by the Fluorescence X radioisotopic technique using a 3mCi Cd-109 source, a Xe-filled proportional detector and a single channel analyzer. In this paper we compared the in vitro survival of human platelets, anticoagulated with EDTA, stored at 22°C, labeled with stable Rb, with that of cells marked with ^{51}Cr. Three experiments were performed. A typical curve is shown. A similar investigation was performed in vivo in rabbits. The mean half-life deduced from ten animals was 22±3h (SE), for Rb labeled platelets; 18±2h for ^{51}Cr marked platelets. The elution rate of the stable tracer shows no difference in comparison with that of ^{51}Cr. Rb as a tracer offers several advantages (low toxicity, no exposure to radiation) and it can represent a valuable alternative to radioisotopes in the study of the platelet survival for the pediatric research.



96 L.Morlé*, F.Morlé*, R.Bouhass*, M.Aguercif*(Intr.by J.F. Desjeux).University Hospital,Oran,Algeria. Some aspects of beta-thalassemia in West-Algeria.

Control studies about patients suspected for thalassemia major revealed 8 cases homozygous for beta-thalassemia in 6 families:3 of them produce no beta A globin at all (beta° thalassemia type) and 5 others synthesize various amounts of beta chain (beta+ thalassemia type).Non alpha/alpha ratios were calculated after incubations of reticulocytes in vitro.They were very similar in the two types,changing from 0,13 to 0,34. However levels of HbF and alpha globin chain synthesis greatly differ in the beta+ thalassemia type (HbF percentage and alpha/non alpha ratios changing from 9 % to 67 % and 0,16 to 0,73 respectively.

7 cases from 4 families (association of beta-thalassemia and HbS) have been also studied: 4 cases produce only beta S globin chains (beta° thalassemia/beta S) and 3 others synthesize beta S and some beta A globin chains (beta+ thalassemia/beta S).

Here also non alpha/alpha ratios did not differ between the two types and vary from 0,37 to 0,43.However in the beta+ thalassemia/beta S cases one member of family more affected by anemia needed more transfusions.

Further clinical and biochemical characterization are now in progress in order to attempt some better classification of beta+ thalassemia in West-Algeria.