

# PRIMARY IMMUNODEFICIENCY (PID) AND CANCER IN CHILDREN

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## INTRODUCTION

Cancer arises more frequently in a background of immunodeficiency. Leukemia and lymphoma are more frequent in children with primary immunodeficiency diseases (PID). We studied retrospectively patients with cancer and primary immunodeficiency in unit of hematology and oncology (Rabat- Morocco).

## RESULTS

- **case 1:** OZ, 6 years old boy admitted for Burkitt's lymphoma with abdominal disease and facial paralysis. The past medical history revealed recurrent pulmonary infections, bronchiectasia. He was treated with GFAOP LMB 05 protocol (French African Pediatric Oncology Group) and he is in complete remission. The immunological investigation after CR revealed immunoglobulin A deficiency.

- **case 2:** IN, 5 years old boy, born to consanguineous parents, admitted for acute lymphoblastic leukemia. The diagnosis of Ataxia-Telangiectasia is not known. The past medical history revealed recurrent infections, hypotonia and ocular telangiectasia treated for conjunctivitis. He was treated by national protocol called Marall 06. He achieved complete remission (CR) but he died at day 27 for intensification by severe sepsis.

- **case 3:** CM, a 15 years old boy, followed for AT since the age of 5 years. was admitted for Burkitt's lymphoma with cervical lymph node, thyroid and abdominal disease. CM was treated with GFAOP LMB 05 protocol (French African Pediatric Oncology Group). The evolution was remarked by deep febrile neutropenia with severe sepsis at day 7 of the first induction. He died 7 days later from chemotoxicity.

- **case 4:** I, 8 months old girl. She is admitted for acute myeloblastic leukemia. The past medical history revealed facial dysmorphism, pigmentary skin disorders, including hypo and hyperpigmented areas, cardiopathy (CIA ostium secundum). The immunological and genetics investigations revealed immunodeficiency and chromosomal instability with enormous increase in exchange events between homologous chromosomes (or sister chromatids) characteristic of Bloom's syndrome. She died in induction phase in a sepsis table.

- **case 5:** KR, 7 years old girl, followed for Nijmegen breakage syndrome since the age of 5 years, was admitted for Hodgkin disease revealed by mediastinal node, hepatosplenomegaly and pulmonary disease.

KR was treated with 5 COP + 2 OEPA + 4 COPDAC without radiotherapy because of the chromosomal instability. She received also transfusion of immunoglobulin every 15 days. We didn't achieve a complete remission after 08 months of treatment.

- **case 6:** C, 11 years old girl, born to consanguineous parents, sister followed for AT, followed also for AT since the age of 6 years, was admitted for lymphoma T revealed by cervical and axillary nodes. C was treated with chemotherapy with good initial tolerance. She died at the consolidation phase in a fever table with altered general status.

## CONCLUSIONS

Possible association cancer and PID in children obliges to explore the immunity especially if past medical history gives them risk factors for developing cancer: hereditary abnormalities (congenital malformation, pigmentary skin disorders, hematological disorders, telangiectasias or history of recurrent infections).