Qure
Center for Complete Care
Blood Diseases. Cancer. Stem Cell Transplantation

Transient Myeloproliferative Disorder

What is Transient Myeloproliferative Disorder (TMD)?

TMD is a condition seen in children with Down Syndrome where shortly after birth there are an increased number of immature white blood cells (blasts) seen in the blood. This condition is also sometimes known as "transient leukemia", since it often goes away without treatment.

What are the symptoms of TMD?

The diagnosis is often made on a routine blood test (CBC). However leukemic blasts can infiltrate other organs and cause symptoms as listed:

- Abdominal swelling due to fluid
- Swelling of the liver
- Rapid heartbeat
- Shortness of breath
- Yellow skin colour (jaundice)

What causes TMD?

TMD is seen exclusively in newborns with Down Syndrome and affects 3-10% of children. There is an association with mutation in the *GATA1* gene which is responsible for normal development of blood cells.

How is TMD diagnosed?

The physical examination will show the features of Down Syndrome and the CBC will show circulating leukemia cells called "blasts". No other testing should be routinely required for diagnosis but blood tests may be done to detect any other complications.

Is TMD curable?

TMD in the majority of patients will go away on its own in the first 3 months of life. However, TMD is potentially fatal and some patients, especially those with liver involvement, respiratory distress or any of the symptoms listed above will need treatment with low doses of a chemotherapy drug called cytarabine given daily injection under the skin.

Patients with TMD are at ***increased risk*** of developing a type of acute myeloid leukemia known as acute megakaryoblastic leukemia in the first few years of life, so it is important to regularly follow up with a ***pediatric hematologist/oncologist*** if your child has had TMD.