Girls should know whether they experienced a first menstruation after birth

Within a few days of birth in approximately 5% of neonates a vaginal bleeding appears lasting 1-3 days. This Neonatal Menstrual-like Bleeding is described in the lay literature as an unusual, but physiological direct consequence of the drop in circulating sex hormones that occurs after birth in all neonates. As such it is deemed not to deserve any clinical attention. The scientific community seems to agree and consequently its occurrence is not recorded in clinical birth notes and the phenomenon has been totally neglected over the last 30 years.

The point is that, if it was simply due to the physiological drop in circulating sex hormones, this bleeding should occur in all female neonates. Driven by this anomaly, we decided to investigate it.

Much to our surprise, we discovered that – starting from 1822 – neonatal bleeding had been carefully investigated. In particular, in 1955, two pathologists from the famous Harvard University in the USA, observed a variety of responses to the same hormones in the uterine lining of late fetuses and neonates.

Clinical studies conducted in the sixties and seventies confirmed this fact and evidenced that low weight at the time of birth was frequently associated with the presence of neonatal menstruation. Also the occurrence of a complication of pregnancy called “pre-eclampsia” and characterized by high blood pressure, swollen extremities and albumin in the urine, increased the occurrence of bleeding at birth. Finally, postmaturity, namely birth after 40 weeks, was associated with an increased risk of neonatal menstrual-like bleeding. In a large study in Yugoslavia, the frequency of neonatal bleeding was 0.78% in premature babies, 3.79% in those at term, and 9.10 in postmature infants.

These observations suggest that the bleeding is related to the presence of fetal distress caused by malfunction of the placenta or fetal anemia during the last months of pregnancy.

Having discovered these associations, we have now presented the hypothesis that progenitor (stem) cells from the shedding uterine lining may be present in the bleeding of neonates and that its occurrence may be causally linked to the relatively rare adolescent form of the disease called endometriosis. This new theory offers an explanation for the occurrence of endometriosis in girls before menarche and the presence of severe endometriosis in young girls.

An important point is that – irrespective of its origin, in clinical practice a diagnosis of endometriosis in adolescents is often delayed. This delay, together with the different origin, can explain the severity of endometriosis affecting some adolescents, especially the form affecting the ovaries that causes the so-called chocolate cysts.

In conclusion, the neonatal menstrual-like bleeding is indeed a true menstruation and seems to be promoted by feto-maternal factors that have in common the presence of disorders characterized by a reduced blood supply to the placenta. In addition, current findings suggest that there is a potential distinction between endometriosis of neonatal versus adult origin.

Although the vaginal hemorrhage in the newborn has been called physiological and is considered by pediatricians and described in the lay literature as a bleeding of no concern, the old literature, and in particular French pediatricians have demonstrated that this bleeding occurs in neonates that were exposed to fetal distress in late pregnancy.

It is time to take-up again investigations of this phenomenon and, hopefully this will soon happen. Unfortunately, even if recording is started, it will take many decennia before results from epidemiological studies will become available. Therefore, telling a girl that she has had a first menstruation after birth implies no disease, but may be useful information for her later in life.

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Publication

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