Management in Neonatal Priapism: Case and Review

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Neonatal priapism is uncommon and its cause is usually unknown, but it can generate anxiety for the parents and the pediatric team. The treatment in most cases is conservative and no sequela are described.

Introduction

Priapism can be defined as a prolonged and persistent erection not associated with sexual desire or stimulation.1 Neonatal priapism is a rare entity with an estimated incidence of 1 in every 6673 newborn males.2 The cause is unknown in most cases.3,4 Initially described in 1876. Most patients present spontaneous resolution of the condition, and few will require any specific treatment.4

We report herein a case of neonatal priapism in a term newborn (NB) and its management.

Case presentation

Male newborn, full term, APGAR 8 and 9 in the 1st and 5th minutes, without comorbidities and with normal clinical examination, except for priapism present at birth (see Fig. 1). Patient was submitted to conservative treatment after complementary examinations such as cavernous puncture gasometry (arterial standard, pH of 4.71, SaO2 of 96% and PaCO2 of 29.5 mmHg - characterizing high flow priapism) and ultrasonographic examination with Doppler of penis, without abnormalities. The RN presented no sign of pain or suffering related to prolonged erection; at no time was a sign of vascular distress, such as cyanosis, observed at the genitourinary examination. Progressive
detumescence occurred, with the penis completely flaccid on the fifth day of life (see Fig. 2). After this period, the patient presented only physiological erections.

Discussion

It is extremely common for healthy newborns to have erections at the lowest stimulus or spontaneously, but they disappear in a few moments. When the erection is maintained for an extended period of time it is called priapism. Neonatal priapism is a rare pathology and of clinical diagnosis. The true incidence is unknown and one study describes a rate of 0.15 cases per 1000 live births between 1974 and 1988. Prolonged erection is not associated with discoloration of the penis and scrotum, and newborn does not appear to experience pain. While prolonged erections in young adults and adults are often accompanied by pain and may produce sequelae, the neonatal form does not appear to be associated with any impairment of long-term sexual function. Of the cases described, the erection begins on the first or second day of life, with an average duration of four to five days.

Because it is a case in a region known for the high incidence of sickle cell anemia, it could be suggested as a possible cause of priapism, but it is unlikely that the event is related to disease activity, since fetal hemoglobin is present in large quantity. Thus in most situations an etiological cause is not identified, and in a minority of these it can be attributed to polycythemia and blood transfusion.

Once confirmed non-ischemic priapism, conservative treatment should be the first option and has been reported successfully in most described cases. The failure of conservative treatment may lead to the need for other treatments such as phlebotomy and partial transfusion that have been applied in cases associated with polycythemia.

Neonatal priapism is a rare entity, with only 17 cases described in the literature since 1876. In addition, it must be differentiated from physiological erections, which are short-lived and common in this age group. Although there is no standardization regarding treatment, conservative management has been applied in most cases and the drug or surgical treatment reserved for patients with persistence of the condition beyond five days. There are no reports of impairment erectile function secondary to neonatal priapism.

Conclusion

Clinical evaluation is sufficient to define the diagnosis of priapism, but complementary tests may help define the type of priapism and define the medical conducts. Patients with confirmed neonatal priapism who are not suffering from ischemia should undergo conservative treatment at the outset, leaving possible interventions as second option.

Conflict of interest

All authors declare to have no conflict of interest.

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