

# **Transgender man receiving testosterone treatment became pregnant and delivered a girl: A case report**

**Running Title:** Pregnancy in a transgender man

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## **Data availability statement :**

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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## **A transgender man receiving testosterone treatment became pregnant and delivered a girl:**

### **A case report**

#### **Abstract**

Many transgender men receive testosterone therapy to achieve virilization. The therapy is often mistaken for having a contraceptive effect because it causes amenorrhea. However, some treated patients become pregnant, which is not well known. A 25-year-old transgender man who had received testosterone for 3 years had an unplanned pregnancy during discontinuation of treatment. He was unaware of his pregnancy, resumed testosterone, and continued treatment until pregnancy was confirmed. His female child was exposed to androgens during the fetal period; thus, careful, long-term observation was required. He developed insomnia and depression during the postpartum, and giving birth made it difficult for him to change his family register to male. Transgender men can become pregnant through sexual intercourse with biological men, even during hormone replacement therapy, so correct contraception is necessary to avoid unwanted pregnancies. Transgender sex education is important to increase awareness of this issue among individuals and medical professionals.

**Key words:** case report, contraception, pregnancy, testosterone, transgender persons

## **Introduction**

Transgender men are born with female reproductive organs, but they identify as male.<sup>1</sup> To achieve the desired masculine appearance, they are often treated with hormone therapy, and some also undergo surgical procedures and get legally registered as male. Understanding and support for transgender individuals has increased recently although very slowly,<sup>2</sup> but their health and reproductive experiences have received little systemic attention.<sup>3</sup> There are also transgender males who obtained an abortion because of an unintended pregnancy or needed infertility treatment because of a decrease / loss of fertility due to genital treatment.<sup>3</sup>

In this report, we present the case of a transgender man who, while undergoing hormone therapy, had sexual intercourse with a biological man and became pregnant. He was unable to have an abortion owing to the baby's gestational age. The unplanned pregnancy and subsequent childbirth caused him much physical and mental distress. Additionally, as the baby was female and the effects of androgen exposure during the fetal period are currently unknown, the child will require careful long-term follow-up.

## **Case Report**

The patient had felt uncomfortable about his assigned sex and gender from childhood, and his sexual orientation was female. At the age of 17, he began to identify as a transgender man. Since the age of 22, he had regularly received testosterone with the aim of virilization, which resulted in amenorrhea as well as virilization, including beard growth and development of a lower voice register. However, when the treatment interval was widened, he occasionally experienced menstruation.

At age 25, he could not go to the hospital for about 8 weeks and could not receive his hormone treatment. The delay in treatment led to the resumption of menstruation, so he was treated promptly and became amenorrheic again. Shortly after that menstrual cycle, he had sexual intercourse with a biological man without using a condom on a whim. Subsequently,

despite continuing hormone therapy from his last menstruation to 17 weeks, his breasts enlarged and his abdomen swelled. He began to suspect that he was pregnant around week 21, went to his obstetrician–gynecologist intending to have an abortion at week 23, but it was too late. He was referred to our hospital for pregnancy management. His cervical length was short, and he was admitted because of further shortening of the cervical length noted at week 26. In this process, the fetus was diagnosed as female without any anomaly. The patient’s testosterone injections were discontinued, his body hair thinned slightly, but his blood testosterone levels remained generally higher than normal levels ( $<0.6$  ng/mL) prior to delivery: 1.8 ng/mL (at 22 weeks), 1.2 ng/mL (at 25 weeks), and 0.5 ng/mL (postpartum). The patient was also referred to a psychiatrist. He had spontaneous vaginal delivery at 38 weeks gestation. His newborn was a female weighing 2,763 g with no external malformations. At his request, the baby was referred to pediatric care and is now living with foster parents. At his request, he was treated for breast secretion arrest after delivery. At 2 weeks post-delivery, the psychiatrist diagnosed the patient with insomnia and a tendency toward mild depression. After 1 month, progress both obstetrically and psychiatrically was good, and medical examinations were discontinued after 2 months. At 3 years after her birth, no developmental abnormalities have been observed in the child. However, an evaluation will be conducted because her unbalanced diet and evident stubbornness could be signs of autism.

## **Discussion**

This case confirms that transgender men can get pregnant even while receiving testosterone. Furthermore, the experience of pregnancy and childbearing was a cause of severe mental and physical distress for the individual in this case. More importantly, the effects of hormone administration on the child to whom the transgender man gave birth remain unclear and require further observation.

Clinical guidelines from the World Professional Association for Transgender Health,<sup>4</sup>

referring to hormone therapy and reproductive health, state that “it may be possible to stop (testosterone) hormones long enough for natural hormones to recover, allowing the production of mature gametes.” In other words, testosterone is recognized as a factor that interferes with pregnancy. However, in the present case, despite having continuous hormone therapy for 3 years, ovulation occurred because of a slight delay in treatment, leading to pregnancy. In fact, in a study by Light and colleagues of transgender men who experienced pregnancy, 60% of them had been on hormone therapy before pregnancy for >1 year (some for  $\geq 10$  years), and 80% had resumed menstruation after stopping therapy within 6 months (that is, 20% became pregnant even with amenorrhea after treatment was discontinued).<sup>3</sup> The researchers suggested that there was no difference in pregnancy rates as a function of the presence or absence of hormone treatment in those who became pregnant.<sup>3</sup> More importantly, our case shows that pregnancy is possible even during hormone therapy irrespective of long-term treatment.

There are many issues that arise when a transgender man becomes unintentionally pregnant. First, he must accept his own pregnancy. Second, the change in body shape that occurs to accommodate pregnancy can be very painful. Third, there is the decision of whether he should raise the child himself. Fourth, the postpartum period can produce difficult physical and mental challenges for the new parent. For a transgender individual who did not plan their pregnancy, this period is arguably even more challenging. In the present case, typical postpartum problems were minimized by psychiatric intervention that included repeated consultations throughout the pregnancy and the provision of foster care immediately after delivery.

In Japan, a change in family register is not allowed if the registrant is the parent of minors. Therefore, the worrisome issue of whether it will be possible to change his family register remains for the transgender man in our case study. It is unclear how the court will decide even though adoption has been established.

Therefore, to avoid pregnancy along with these related problems, contraceptive use during sexual intercourse with the opposite sex is essential, with or without hormone therapy. However,

in reality, the rate of successful contraception among transgender men during hormone administration is very low.<sup>3</sup> In general, hormone therapy and accompanying amenorrhea and the effects of contraceptives are misunderstood as being equivalent.<sup>3</sup> We keenly feel that correct contraception and guidance for its use among transgender individuals are important factors in avoiding unwanted pregnancies.

Incidentally, the baby born in this case study was exposed to testosterone during the fetal period because of the hormone treatments received by her mother (a transgender man). Thus, it is important to be aware of the effects that hormone therapy can have on fetuses. For example, multiple reports discuss the exposure to testosterone of female babies because of their mothers' polycystic ovarian syndrome (PCOS), and others show that congenital adrenal hyperplasia raises their likelihood of having what have traditionally been considered male/boy-oriented tastes and behaviors,<sup>5</sup> increasing their risk of developing PCOS<sup>6</sup> and the risk of autism.<sup>7</sup> Indeed, the female child in the present case has shown some characteristic symptoms of autism, so careful follow-up is ongoing.

In recent years, understanding of transgender experiences has proliferated, and we predict that sex-hormone therapy will become increasingly common. However, it remains a serious problem to which sufficient attention has not been given. Consequently, health support for transgender individuals' sex lives and pregnancies is lacking. Indeed, many transgender men suffer from these problems, with many facing unplanned pregnancies, abortions, and family register issues.<sup>3</sup> Sharing correct information about contraception and pregnancy and offering education on these topics is important for transgender individuals.<sup>8</sup> In particular, if they are considering hormonal or surgical treatments, I think it is important for the attending physician (obstetrician/gynecologist, urologist, plastic surgeon, etc.) to provide information on contraception and family planning. We very much hope that this case will provide an opportunity to reassess the importance of transgender sex education.

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**Disclosure**

The authors declare that they have no competing interests.

**List of Abbreviations**

PCOS: polycystic ovarian syndrome

**Ethics approval and consent to participate**

Not applicable.

**Consent for Publication**

Written informed consent was obtained from the patient for publication of this report. The consent information will be disclosed for reviewers upon request.

**Data Availability Statement**

Not applicable.

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