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IMAGES IN CLINICAL PRACTICE

IS IT JUST AN ABDOMINAL PAIN?

Inês F. Ferreira, Diana H. Silva, Ana Foles, Cristina Pedrosa.

Pediatric Service, São Bernardo's Hospital, Setúbal's Hospital Centre, Portugal.

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pregnancy, adolescence, human chorionic gonadotrophin, pregnancy test.

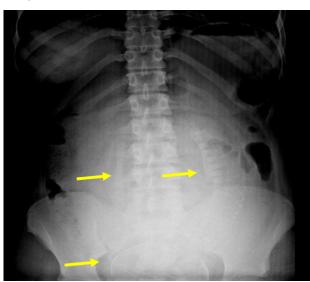
ARTICLE HISTORY

How come the urinary pregnancy test was negative?

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A 16-year-old adolescent, with a history of constipation, presented at the emergency department (ED) with an abdominal pain, located in the lower quadrants of the abdomen and radiating bilaterally to the lumbar region. The pain had started 6 hours prior to her hospital admission. She reported an increase in abdominal volume over the previous week and noted that her last bowel movement had occurred 4 days prior. According to her information, the last menstrual period had been 30 days before her presentation and she denied any history of sexual intercourse or any other symptoms. Upon examination, the abdomen was distended and not depressible, with a palpable abdominal mass extending from the lower quadrants to approximately 5 fingers above the umbilical scar. An immunological diagnosis of pregnancy was requested, but it was negative and an abdominal ultrasound was not available at the time. Relying the information given, an abdominal X-ray was performed, revealing bone structures consistent with a fetus in a cephalic position (Figure 1). The patient underwent evaluation by obstetric specialists, who confirmed a full-term pregnancy in active labor.

Figure 1. Abdominal x-ray showing bone structures compatible with a fetus.



Address for Correspondance: Inês F. Ferreira, Pediatric Service, São Bernardo's Hospital, Setúbal's Hospital Centre, Portugal.

Email: ines.ferreira@ulsa.min-saude.pt

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Abdominal pain is a common complaint among adolescents presenting at the ED and can have multiple causes, including surgical pathology, constipation, pregnancy and somatization. The most common of all in the pediatric population is constipation. However, at this age, it is particularly crucial to consider ruling out pregnancy as part of the diagnostic process, even though most times teenagers wild hold information at admission to the ED. The urine pregnancy test is the primary diagnostic tool used in these situations.1 These tests rely on antibodies to detect human chorionic gonadotrophin (hCG). This hormone is present in the mother's serum and urine, exhibiting patterns of appearance and elevation similar in both.1 The free β-core (hCGβcf), present in urine, is the predominant form at the end of pregnancy.2,3 These tests have a sensitivity of >95%, yet false negatives (FN) arise due to several factors such as diluted urine, expiration of the test kit, misinterpretation or exceptionally high concentrations of hCGBcf, creating a prozone effect.4,5 The latter circumstance likely occurred in this case. Although the teenage pregnancy rate has fallen by 11.6% in the last 20 years, it remains to be a persistent global issue, showcasing significant discrepancies worldwide.6 In 2021, approximately 14% of adolescent girls and young women gave birth before reaching the age of 18.7 According to the latest available data, in 2022 there were 1591 live births from Portuguese adolescent mothers, representing nearly 1.7% of the total live births in the country.8 This case prompts reflection on our approach. How should we respond when such situations arise in the ED? What strategies should healthcare professionals employ to educate adolescents about sexual education? Could ED visits serve as opportunities for this purpose? 1) It is, without any doubt, somewhere we can remind them of the risks, not only of pregnancy, but also of sexually transmitted diseases and the importance of barrier contraceptive methods; we can have those contraceptive in the ED to give them; we can also have fliers about these subjects to handout; 2) We should seize this opportunity to test them for sexually transmitted diseases; if they are HIV positive, start directed medication; if there is any suspicion of vaginitis or any other condition, treat accordingly; 3) It's essential to access these aspects in a private

space for confidentially disclosing test result along with

trained staff who can provide counseling and options; 10



4) Pregnant adolescents are different from other groups of pregnant women in all major aspects of assessment: social environment; personal, social and psychological development and their physical response. Therefore, the prenatal care should be adequate to their needs. 11 5) Besides the orientation to the Obstetrics Department, we should also orient her to Adolescent Medicine (to check the analysis and short/long term follow-up) and Psychology Appointments. While adolescent parenthood rates have declined, it remains a life-altering experience for those affected, fundamentally altering their life path forever.

Compliance with ethical standards

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References:

- Mann K, Saller B, Hoermann R. Clinical use of HCG and hCG beta determinations. Scand J Clin Lab Invest Suppl 1993; 216:97.
- Stenman UH, Tiitinen A, Alfthan H, Valmu L. The classification, functions and clinical use of different isoforms of HCG. Hum Reprod Update 2006; 12:769.
- Gronowski A. et al. False-Negative Results in Point-of-Care Qualitative Human Chorionic Gonadotropin (hCG) Devices Due to Excess hCG Core Fragment; Clinical Chemistry 2009; 1389-1394.

- Edelstam G. Human chorionic gonadatropin (hCG) during third trimester pregnancy; Scand J Clin Lab Invest 2007; 67: 519-525.
- 5. Rull K. Expression of β -subunit of human chorionic gonadotropin genes during the normal and failed pregnancy; Hum Reprod. 2005 December ; 20(12): 3360-3368.
- World Health Organization (2023) Adolescent pregnancy : https://www.who.int/news-room/fact-sheets/detail/ adolescent-pregnancy.
- UNICEF (2023) Adolescent Health https://data.unicef. org/topic/child-health/adolescent-health/
- Instituto Nacional de Estatística [INE]. (2020). Nados-Vivos (n.º) por idade da mãe: anual - 2022 [Live births (no.) by mother's age: Anual - 2022] https:// www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_ indicadores&indOcorrCod=0001541&contexto=pgi& elTab=tab10&xlang=pt.
- Pires R, et al. Inefective Pregnancy Prevention During Adolescence: Assisting Healthcare Providers in Portugal With Individualized Risk Assessment. The Journal of Primary Prevention (2021) 42:385-407.
- Coles, M. et al. If You Do Not Ask, They Will Not Tell: Evaluating Pregnancy Risk in Young Women in Pediatric Hospitals. Journal of Adolescent Health 58 (2016) 251-252.
- Tilgham, J; Lovette, A. Prenatal Care: The Adolescent's Perspective. Journal of Perinatal Education, 17 (2), 50-53.