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POLISH GYNECOLOGY
GINEKOLOGIA POLSKA
ORGAN POLSKIEGO TOWARZYSTWA GINEKOLOGICZNEGO
THE OFFICIAL JOURNAL OF THE POLISH GYNECOLOGICAL SOCIETY

ISSN: 0017-0011

e-ISSN: 2543-6767

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DOI: 10.5603/GP.a2022.0124

Article type: Clinical vignette

Submitted: 2022-08-08

Accepted: 2022-09-09

Published online: 2022-11-21

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Articles in "Ginekologia Polska" are listed in PubMed.

CLINICAL VIGNETTE

Ectopic pregnancy after pancreas-kidney transplantation

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Key words: ectopic pregnancy; simultaneous pancreas-kidney transplantation

Simultaneous pancreas-kidney transplantation (SPKTx) is an option of treatment offered to patients with type 1 diabetes mellitus (DM) and end-stage renal disease [1]. Since type 1 diabetes mellitus is diagnosed usually in young patients, they are commonly considered being candidates for SPKTx.

The pancreas is usually placed in recipients right iliac fossa and the kidney is placed in the contralateral iliac fossa [2]. This procedure is related to a high incidence of surgical revisions (32.2%) and readmissions. Major causes of early postoperative complications are bleeding, pancreatic leak/infection, and thrombosis [3]. Some main reasons for readmissions include infections (23.1%) kidney/urinary tract disorders (16.2%), digestive system disorders (15.6%), pancreatic/hepatobiliary disorders (11.1%), and electrolyte/nutritional disorders (10.3%) [3].

Nevertheless, SPKTx provides significant improvement in quality of life. Fertility in women after transplantation is usually reduced and affected by general condition of the patient, immunosuppressive therapy and possible complications and adhesions after surgery.

We present the case of a 43-year-old woman with ectopic pregnancy (EP) after SPKTx. The patient was diagnosed with type 1 diabetes mellitus at the age of 20. With time she developed DM related end-stage renal disease, hypertension, retinopathy, and neuropathy. At the age of 38, she was on dialysis and a year later she underwent SPKTx. After the procedure she required three surgical revisions due to massive bleeding from transplanted pancreas and cholecystitis.

Four years after SPKTx, she arrived in the emergency room in the hospital in Nysa with a strong abdominal pain, nausea and vomiting for two weeks. An 55 x 42 mm oval, heterogeneous mass in the pelvis was observed on transabdominal ultrasound (Fig. 1 C, D). Contrast computed tomography (CT) revealed tubal ectopic pregnancy (EP) right behind the transplanted kidney in the left part of the pelvis (Fig. 1A). She was admitted to the Department of Obstetrics and Gynecology. On transvaginal ultrasound a gestational sac in the left oviduct with a 7-week embryo without visible fetal heart rate was confirmed (Fig. 1B). First beta human chorionic gonadotropin (β-hCG) and hemoglobin (HGB) values were 67 368 mLU/mL (n < 1.00) and 12.1 g/dL (N: 11.7–15.5), respectively. Consecutive measurement after four hours demonstrated a decrease in β-hCG 60 944 mLU/mL, as well as HGB — 10.6 g/dL.

Although the proximity of EP and transplanted kidney carried a serious risk of organ damage, there was a life-saving indication to perform an urgent laparotomy together with urologist. During the surgery, 500 mL of dark blood with numerous clots and multiple postoperative adhesions in the pelvis were found. A successful left-uterine appendages resection with removal of ectopic pregnancy in the ruptured oviduct was performed. The patient made an uneventful postoperative recovery and was discharged from the hospital five days after the surgery.

Several cases of successful pregnancies after such transplants have been described, proving that the multidisciplinary medical team can ensure the patient to have a relatively safe course of pregnancy [4]. It is worth remembering that toxemia, preeclampsia, or preterm birth are common among pregnant women after transplantation. Till today, the impact of SPKTx on the risk of ectopic pregnancy has not been described in the literature as it is extremely rare. This publication is second after one from 2016 by Yamamoto S et al. [5] regarding such a

report. Lesson learned from this clinical study is that we should consider multiple postoperative adhesions affecting the risk of EP in women after SPKTx [5].

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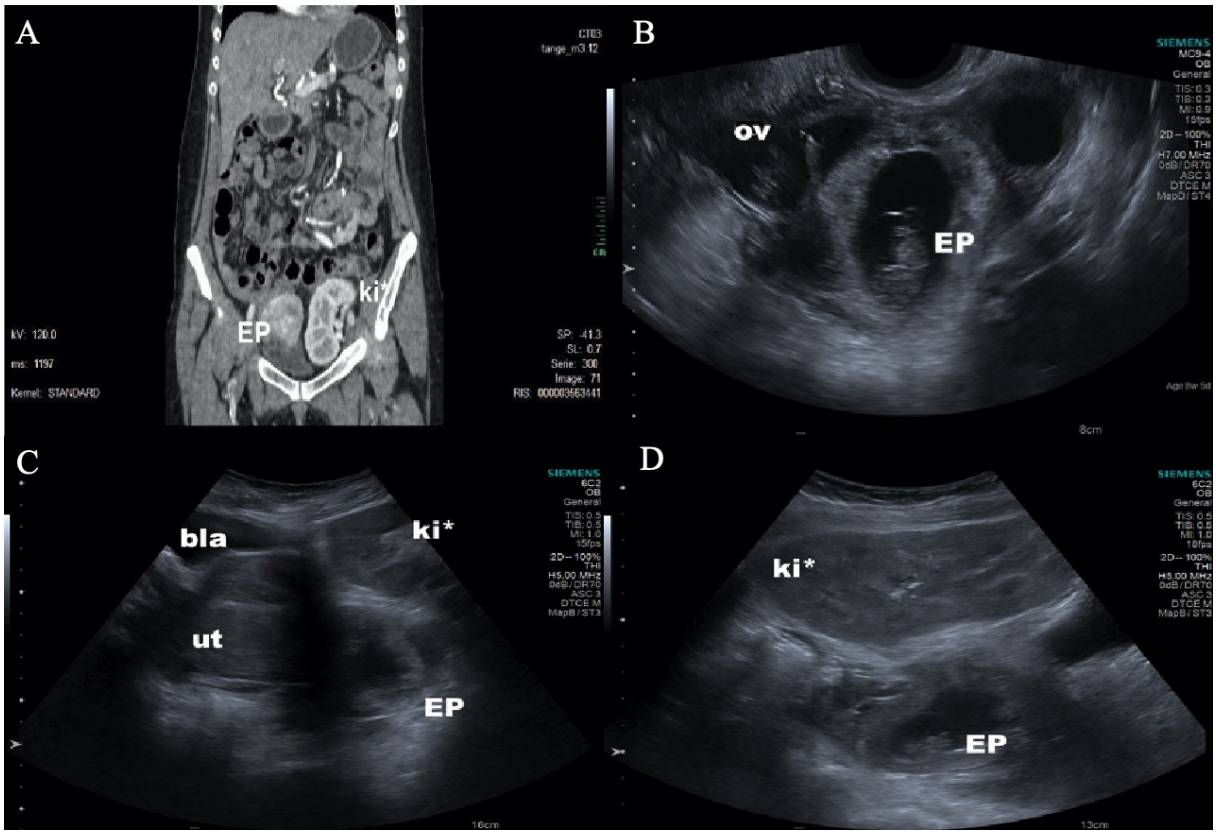

Figure 1. A. CT scan — frontal plane, in bottom left ectopic pregnancy (EP), in bottom right transplanted kidney (ki*); **B.** Transvaginal ultrasound — transverse plane, EP in the left oviduct located beside left ovary (ov); **C.** Transabdominal ultrasound — longitudinal plane, scan reflects the localization of transplanted kidney (ki*), EP, uterus (ut) and bladder (bla); **D.** Transabdominal ultrasound — transverse plane, transplanted kidney (ki*) and EP in the left lower abdomen.