

Comprehensive approach to fertility and endocrine preservation for reproductive age female colorectal cancer patients: a case series.

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Background/Synopsis:

Over the past decade, the incidence of colorectal cancer diagnoses among adolescents and young adults has increased by nearly 50%. In the US, about 10% of patients diagnosed with colon cancer and nearly 20% diagnosed with rectal cancer are under the age of 50. For rectal cancer, the therapy often involves radiation to the pelvis. The gonadotoxic effects of radiation can lead to infertility in reproductive age patients.

Objective/Purpose:

(1) Raise awareness of the rising incidence of colorectal, particularly rectal, cancer among reproductive age females, and the gonadotoxic effects of cancer treatment; (2) Report a comprehensive approach to fertility preservation utilized in this subset of patients shown to preserve ovarian endocrine function and led to a live birth in a cancer survivor.

Methods:

A retrospective review was performed of patients diagnosed with colorectal cancer and evaluated by reproductive endocrinology and infertility (REI) for fertility preservation. We review the fertility preservation methods, as well as ovarian endocrine and pregnancy outcomes.

Results:

All three women were Stage IIA at the time of diagnosis. Case 1 is a 38-year-old G1P0010 who was diagnosed with rectal cancer and underwent assisted reproduction with cryopreservation of 2 oocytes one month later. She underwent laparoscopic ovarian transposition 5 days after cryopreservation. She then received radiation therapy and surgical management. Case 2 is a 31-year-old G1P1001 who underwent low anterior resection prior to chemotherapy and radiation. She had 10 blastocysts cryopreserved. She then underwent left ovarian cystectomy for a dermoid tumor and bilateral ovarian transposition. After completion of their cancer treatment, both cases 1 and 2 ultimately resumed their menstrual cycles. Case 3 is a 28-year-old G0 who was seen by REI 5 days after her cancer diagnosis. She had 6 oocytes and 5 blastocysts cryopreserved. Afterwards, ovarian transposition was done. After completion of cancer therapy, the patient's ovaries were repositioned during an ileostomy takedown procedure. Subsequently, she had a spontaneous pregnancy and live birth.

Conclusion:

Reproductive age colorectal cancer patients whose cancer treatments include pelvic radiation should be counseled regarding fertility preservation. Oocyte or embryo cryopreservation with surgical ovarian transposition is a comprehensive and effective approach to fertility and ovarian endocrine preservation and has been shown to lead to resumption of menses as well as a spontaneous pregnancy and live birth.