Introduction/Background

Chemo-induced amenorrhea represents one of the major toxicities which is a source of concern for young women suffering from breast cancer and treated with chemotherapy. It is defined by an oligo/amenorrhea for 4 months and a level of follicle stimulating hormone (FSH) > 25 IU/l twice at 4 week intervals before the age of 40 years.

Methodology

We conducted a retrospective study on files, in the Medical Oncology department of the CHU Tlemcen over a period of 2 years, including young patients (≤ 35 years old) treated, during the year 2020 and 2021, by adjuvant chemotherapy for localized breast cancer to study the incidence of chemotherapy-induced amenorrhea (ICA).

Results

Fourteen patients were collected. The average age is 33 years [27, 35]. Invasive ductal carcinoma was found in 11 patients (78.6%). Hormonal receptors were positive in 11 patients (78.6%) and with a luminal B molecular profile in 6 patients (42.9%). Chemo-induced amenorrhea was observed in 11 patients (78.6%), half of whom were 35 years old (45.45%). Four patients were treated with the anthracyclin based protocol (4AC 60) and 8 patients with sequential anthracyclin taxane protocol (4AC/4TXT (4), 3FEC/3TXT (2), 3EC/3TXT (1), 3EC/12 Taxol w(1) and, 2 patients with sequential anthracyclin – taxane -trastuzumab protocol (4AC/4TXT/12trastuzumab (1), 3EC/3TXT/12trastuzumab (1). Its was definitive amenorrhea in 9 patients. The treatment was completed by hormone therapy such as Tamoxifen in 9 patients (81.81%) and Tamoxifen + medical castration in 2 patients (14.3%).

Conclusion

Young women with localized breast cancer are often candidates for adjuvant chemotherapy, which may be responsible for amenorrhea and have long-term consequences on fertility after definitive amenorrhea.

Methodology

From July 2020 to April 2022, we managed three cases of young women with controllable ovarian BOT recurrence after unilateral adnexectomy. Median age at diagnosis was 26 years (I.Q.R 25–28). After multidisciplinary meeting each patient has been addressed to oncofertility consultation with the gynecologic oncologist and the reproductive physician. Two patients had strong desire to conceive furthermore they underwent a controlled ovarian hyperstimulation (COH) with concomitant letrozole and ovarian cryopreservation. In one case the ART (assisted-reproductive-technology) procedures has been performed with tumor onsite.

Results

Second surgery consisted in unilateral laparoscopic cystectomy in all cases. In those patients who have undergone COH, two and five mature oocytes were cryopreserved, respectively. After 11 months of surgery one patient became pregnant spontaneously and she gave birth at 39 weeks with an excellent obstetrical outcome. In one case the oocytes cryopreservation has been rejected by the patient, but the endocrine function has been preserved.

Conclusion

In young women, with BOT ovarian recurrence, a second conservative treatment should be always considered and an oncofertility consultation should be recommended. Clinical management must be tailored on a case-by-case basis by a gynecologic oncologist and reproductive physician meeting.