Medical abortion: Teratogenic effects of misoprostol

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Introduction

Some 40 million abortions are performed around the world every year. In Spain, this figure reached 112,390 in 2011. Of these, approximately 5% were medical abortions. This percentage varies widely in other countries: 67% in Portugal; 49% in France; 40% in England; and 70% in Scotland and Finland.

In the 1980s, more than 20 clinical trials had proven the efficacy of mifepristone coupled with misoprostol in inducing an abortion in the first few weeks of pregnancy. Medical abortions however, cause negative side-effects, including teratogenic effects.

Reported cases

The first case of teratogenic effects associated with the use of mifepristone was described in 1988, when Roger Henrion, Head of the maternity ward at Hospital Post-Royal of Paris, reported the case of an infant born with physical abnormalities after a failed abortion attempt. Pristone was described in 1988, when Roger Henrion, Head of the

Seven children born with malformations in their limbs, four of which had been diagnosed with Moebius syndrome (Gonzalez et al. 1993). In 1994 Genest et al. (1994) reported on a failed abortion that was induced with misoprostol; the infant was born with deformed legs and omphalocele.

In 1996, two French studies involving 2,480 women who had taken mifepristone and misoprostol found that of these, 21 pregnancies continued to term, resulting in three infants (14.3%) born with congenital malformations (Barnett 1996).

Nevertheless, in 1997, a study involving 86 pregnant women who had taken misoprostol, and a similar control group, showed that the use of misoprostol was not associated with an increase in congenital defects in infants (Schüler et al. 1997).

However, in 1998, it was found that 17 of 42 children born to women who had used misoprostol to medically abort had malformations on their extremities, as well as anomalies in cranial nerves (Gonzalez et al. 1998).

In 2000, a study found that 57 of 9,653 of infants who had been exposed to misoprostol, had been born with malformations (Orioli and Castilla 2000).

In 2006, a study reported on 13 cases of children born after failed abortions induced by misoprostol; of these, three (23%) were born with severe physical malformations (Gary and Harrison 2006).

The majority of the aforementioned cases were compiled in a review published in 2006 (Da Silva Dal Pizzol et al. 2006), which included 4,899 women that had used mifepristone and misoprostol to induce a medical abortion and which were compared with a control group of 5,742 women. It was found that of the infants born with malformations, the most frequently-occurring congenital malformations were those occurring in the extremities and the Moebius syndrome.

Two years later (2008), another case of the Moebius syndrome in a newborn was reported, attributed to a failed abortion with both mifepristone and misoprostol (Bos-Thompson et al. 2008).

However, it is also important to mention that the number of infants born with congenital defects after a failed medical abortion is quite small, as the efficacy of this method is around 95%; that is, only 5% of women who use these drugs to induce a medical abortion will fail in their attempt. Although approximately 80% of these ensuing pregnancies will result in a live birth (Gary and Harrison 2006), the relatively small number of 15–20% of these infants will be born with congenital defects (Gary and Harrison 2006; Barnett 1996).

Conclusion

The objective should be to prevent these malformations altogether, therefore many practitioners who perform abortions prefer surgical abortions to medical abortions during early pregnancy, especially if we consider the fact that the number of complications resulting from the surgical procedure is lower than those resulting from that using pharmacological agents.

In summary, medical abortion carries with it a number of potential teratogenic side-effects for infants resulting from failed abortions. We believe this issue should be a part of any ethical discussion concerning this type of procedure.

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References


ribbon of tumour cells (c); (b) shows the presence of metastasis in the cervix (H & E, Chandigarh, India and Research (PGIMER), Gynecologic Pathology, Postgraduate Institute of Medical education and Research (PGIMER), Sector 12, Chandigarh 160012, India. E-mail: rashmibagga@gmail.com

Introduction

Primary fallopian tube transitional cell carcinoma is uncommon; accounting for only 0.18 – 1.6% of gynaecological malignancies (Nordin 1994). Preoperative diagnosis of fallopian tube carcinoma is difficult, most signs and symptoms are non-characteristic. Although pelvic mass or bloody discharge is one of the common presenting symptoms (Ben-Hur et al. 1999), tubal carcinoma is an incidental finding during surgery for an unrelated condition (Alvarado-Cabrero et al. 1999). However, a correct preoperative diagnosis is achieved in fewer than 5% of cases and, in many cases, tubal carcinoma is an incidental finding.

Figures 1. Photomicrograph of the peritoneal biopsy showing multiple epithelioid cell granulomas (a) and transitional cell carcinoma of the fallopian tube showing poorly-differentiated transitional cell carcinoma of the left fallopian tube. Examination of the surgical specimen revealed two nodules in the endocervical area. Histopathological examination revealed a tumour in the right fallopian tube, with no other deposits. She underwent total hysterectomy with bilateral salpingo-oophorectomy, pelvic lymphadenectomy was performed. Intraoperatively, the uterus was found to be of normal size and mobile. The left fallopian tube was dilated and non-compressible and contained grey-white fluid. There was a tumour in the right fallopian tube, with no other deposits. She underwent total hysterectomy with bilateral salpingo-oophorectomy, pelvic lymphadenectomy was performed. Intraoperatively, the uterus was found to be of normal size and mobile. The left fallopian tube was dilated and non-compressible and contained grey-white fluid. There was a tumour in the right fallopian tube, with no other deposits. She underwent total hysterectomy with bilateral salpingo-oophorectomy, pelvic lymphadenectomy was performed. Intraoperatively, the uterus was found to be of normal size and mobile. The left fallopian tube was dilated and non-compressible and contained grey-white fluid. There was a tumour in the right fallopian tube, with no other deposits. She underwent total hysterectomy with bilateral salpingo-oophorectomy, pelvic lymphadenectomy was performed. Intraoperatively, the uterus was found to be of normal size and mobile. The left fallopian tube was dilated and non-compressible and contained grey-white fluid. There was a tumour in the right fallopian tube, with no other deposits. She underwent total hysterectomy with bilateral salpingo-oophorectomy, pelvic lymphadenectomy was performed. Intraoperatively, the uterus was found to be of normal size and mobile. The left fallopian tube was dilated and non-compressible and contained grey-white fluid. There was a tumour in the right fallopian tube, with no other deposits. She underwent total hysterectomy with bilateral salpingo-oophorectomy, pelvic lymphadenectomy was performed. Intraop

Cases and dilatation and drainage was done. Endometrium was atrophic and suggestive of cervical squamous cell carcinoma. Type II radical hysterectomy and bilateral salpingo-oophorectomy with postoperative radiotherapy and tamoxifen, 25 years previously.

Case report 2

A 59-year-old postmenopausal woman presented with lower abdominal pain and high-grade fever of 1-month duration. Ultrasound examination was normal, except for low-level echoes in the cavity, which had atypical presentations: one with pyrexia of unknown origin and the other, a cervical malignancy.

Peritoneal biopsy revealed granulomatous inflammation but no evidence of malignancy. She was diagnosed as FIGO stage I. As she continued to have fever and peritoneal biopsy showing granulomatous inflammation, she was given anti-tubercular treatment. However, the fever did not respond to this and subsided only after initiating chemotherapy. She received six courses of adjuvant chemotherapy once every 3 weeks with carboplatin (AUC 6) and paclitaxel (175 mg/m 2 ). She is in remission at 18-months follow-up.

