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Prevention of gynaecologic cancer

47 PERFORMANCE OF CONE BIOPSY EXCISION FOR TREATMENT OF CERVICAL INTRAEPITHELIAL NEOPLASIA

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Introduction/Background Cervical cancer is to a great extent preventable disease through detection and treatment of cervical intraepithelial neoplasia (CIN). All local treatment modalities are efficient in preventing CIN. The influence of different techniques on the risk of recurrence remains therefore unclear. The minimum radicality of treatment to prevent treatment-induced morbidity and the increased risk of future invasion is required. The aim of the study was to assess the adequacy of cone biopsy excision of naked eye lesions as a method of treatment of cervical intraepithelial neoplasia (CIN). Women treated with LEEP were used as control.

Methodology The current study was randomized clinical trial. Cone biopsy excision of naked eye lesions was compared to LEEP of the transformation zone in women undergoing surgical treatment of CIN. The primary outcome was involvement status of the margin of the resected cone. Secondary outcomes were procedure time, blood loss, hemostasis time, intraoperative and postoperative complications, size of the resected area and postoperative pain, validated by visual analog scale (VAS).

Results Ninety women were evaluated for disease persistence after excision of the naked eye lesions using cone biopsy excision. Eighty-five cases treated with excision of the transformation zone using LEEP. There is no statistically significant difference as regarding the margin involvement of the resected cone, the primary outcome, was observed between cone biopsy excision and LEEP (11/90 [12%] vs 8/85 [9.4%], respectively; $p = 0.55$, OR=1.34 95% CI: 0.5115). Postoperative pain was lower after cone biopsy excision (VAS: 0 [0–2] vs 1 [0–3]; $p = 0.02$). The secondary outcome parameters; procedure time, blood loss, hemostasis time, intraoperative and postoperative complications and size of the resected area were not different between the study groups. Age, parity, contraception method and body mass index did not influence the primary and secondary outcome parameters using multivariate analysis.

Conclusion Cone biopsy excision and LEEP are evenly effective and safe procedures.

Disclosures No conflict of interest related to this research.

93 PROPHYLACTIC HUMAN PAPILLOMAVIRUS HPV VACCINATION TO PREVENT RECURRENCE OF CERVICAL INTRAEPITHELIAL NEOPLASIA : A META-ANALYSIS

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Introduction/Background The aim of this systematic review and meta-analysis was to review evidence supporting the use of prophylactic human papillomavirus vaccines to influence the risk of recurrence of cervical intraepithelial neoplasia after surgical treatment.

Methodology A systematic literature search was performed for publications reporting risk of recurrence of cervical intraepithelial neoplasia after surgical treatment in patients receiving human papillomavirus vaccination (either in the prophylactic or adjuvant setting). Comprehensive searches of 6 electronic databases (MEDLINE, Embase, Web of Science, PubMed, Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials, and references of identified studies) from their inception were performed (English language only), and hand search reference lists were performed. Two independent reviewers applied inclusion and exclusion criteria to select included papers, with differences agreed by consensus. The literature search was performed using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Results were reported as mean differences or pooled odds ratios (OR) with 95% confidence intervals (95% CI).

Results A total of 5744 citations were reviewed; 5 studies comprising 3562 patients were selected for the analysis. There were 1453 patients in the vaccinated group and 2109 in the placebo or unvaccinated group. The incidence of histologically confirmed cervical intraepithelial neoplasia 2+ was reduced in the vaccinated compared to the unvaccinated group (OR 0.51, 95% CI 0.35 – 0.74, $p = 0.0003$). The number needed to treat (NNT) to prevent one recurrence was 43. Both pre-treatment vaccination (OR 0.48, 95%CI 0.25–0.94, $p=0.03$, NNT=40) and adjuvant vaccination (OR 0.53, 95%CI 0.34–0.81, $p=0.004$, NNT=38) reduced recurrence rates.

Conclusion Prophylactic or adjuvant human papillomavirus vaccination reduces the risk of recurrent cervical intraepithelial neoplasia 2+. These data support further investigation of its role as an adjuvant to surgical treatment.

Disclosures No conflict of interest to declare.

194 ATAXIA-TELEANGIECTASIA FOLLOWED UP IN A HEREDITARY GYNAECOLOGICAL CANCER UNIT OF A TERTIARY HOSPITAL

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Introduction/Background Ataxia-telangiectasia is an autosomal recessive neurodegenerative disorder with immunodeficiency and an increased risk of developing cancer, caused by mutations in the ataxia-telangiectasia mutated (ATM) gene. Female carriers have an increased risk (20–30%) of developing breast cancer.

It is known that heterozygosity for a pathogenic ATM variant is present in 1%–2% of the adult population.

Methodology Retrospective observational study. Review of patients followed in the inherited cancer unit at Gregorio Marañón University General Hospital between 1st January 2012 until 28th February 2020.

The statistical analysis was carried out using SPSS 26.0.

Results During the indicated period, we followed 333 patients with confirmed genetic mutations that predispose to developing gynaecological cancer. Of the total, 1.5% (5/333) were carriers of a pathogenic ATM mutation and 0.6% (2/333) of a variant of uncertain meaning ATM mutation.

Within the cohort of patients carrying a pathogenic ATM mutation, all of them had family history of breast cancer and one also of ovarian cancer. 3/5 of the patients were diagnosed with breast cancer at 38, 40 and 48 years old, respectively. One of them, had a second contralateral breast cancer at 58 years old.

The histology of the primary breast cancer was: ductal carcinoma in situ, invasive ductal carcinoma and invasive lobular carcinoma. Tumor stage was 0 in one case and stage I in two cases. Primary treatment was surgery in all patients: unilateral mastectomy with homolateral axillary lymphadenectomy in one patient and conservative surgery with selective sentinel lymph node biopsy in the other 2. Adjuvant treatment was only needed in 2 patients: radiation therapy and hormone therapy in one case and radiation therapy, chemotherapy and hormone therapy in the other.

Characteristics of these patients are summarized in table 1.

Abstract 194 Table 1

Table 1.

Ataxia-telangiectasia (n=7)	Frequency (%)
Mutation type	
Pathogenic	5/7 (71.4%)
Variant of uncertain meaning	2/7 (28.6%)
Family history of cancer (ATM pathogenic mutation)	
First degree	2/5 (40%)
Second degree	1/5 (20%)
Unknown	2/5 (40%)
Personal history of cancer (First tumour location)	
No cancer	2/5 (40%)
Breast	3/5 (60%)
Histology of the primary breast cancer	
Ductal carcinoma in situ	1/3 (33.3%)
Invasive ductal carcinoma	1/3 (33.3%)
Invasive lobular carcinoma	1/3 (33.3%)
Breast cancer stage	
Stage 0	1/3 (33.3%)
Stage I	2/3 (66.6%)
Primary breast cancer treatment	
Unilateral mastectomy with homolateral axillary lymphadenectomy	1/3 (33.3%)
Conservative surgery with selective sentinel lymph node biopsy	2/3 (66.6%)
Adjuvant treatment	
Not needed	1/3 (33.3%)
Radiation therapy and hormone therapy	1/3 (33.3%)
Radiation therapy, chemotherapy and hormone therapy	1/3 (33.3%)

Conclusion Patients carrying ATM mutations have a moderate-high risk of developing breast cancer and should be followed in specialized hereditary cancer units, in tertiary hospitals.

Disclosures No conflicts of interest to disclose.

229

BREAST CANCER PATIENTS AT INCREASED RISK OF DEVELOPING TYPE II ENDOMETRIAL CANCER; RELATIVE AND ABSOLUTE RISK ESTIMATION AND IMPLICATIONS FOR GENETIC COUNSELLING

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Introduction/Background Breast cancer (BC) is a recognised risk factor for endometrial cancer (EC). Emerging literature indicates it confers a higher risk of type II EC (T2EC) than type I EC (T1EC). Some surgeons offer a prophylactic hysterectomy to BC patients referred for risk-reducing bilateral salpingo-oophorectomy yet insufficient evidence prevents this from being standard practice. We aimed to quantify their relative and absolute risks of developing both endometrial cancer subtypes and identify a higher-risk group that should be considered for prophylactic hysterectomy.

Methodology This retrospective observational case-control study compared patients diagnosed with BC between 2008 and 2014, who subsequently developed EC within 10 years to those who did not. Absolute and relative risks were calculated using the numbers of regional BC and EC cases within this group, alongside 2009 UK female population and EC incidence statistics. Binary logistic regression generated adjusted odds ratios for patient- and disease-specific variables.

Results Forty-five BC patients developed endometrial cancer; twenty-four had T1EC and twenty-one had T2EC. Their relative risk of developing EC was greater than the general population's (RR 10.24, $p < 0.0001$). Notably, this was higher for T2EC (RR 32.37, $p < 0.001$) than T1EC (RR 6.12, $p < 0.0001$). Nonetheless, the absolute risk remained low. Tamoxifen exposure was significantly more prevalent amongst T2EC patients (adjusted odds ratio 79.61, $p = 0.003$). Increased age at BC diagnosis was associated with T1EC (adjusted odds ratio 1.10, $p = 0.043$) and T2EC (adjusted odds ratio 1.13, $p = 0.03$). Neither smoking status nor family history of BC was significantly associated with any outcome.

Conclusion Women with BC were more likely to develop T2EC than T1EC. The absolute risk was low, but the cumulative risk was substantial enough to consider prophylactic hysterectomy in the premenopausal group. Tamoxifen exposure was significantly predictive of EC, particularly T2EC, and might facilitate risk estimation. Older women at BC diagnosis who received tamoxifen treatment should be screened and closely monitored for EC. Clarification of the menopausal status will help make more meaningful recommendations.

Disclosures All authors state that they do not have any conflicts of interest.