POPULATION TESTING AND PERSONALISED OVARIAN CANCER RISK PREDICTION FOR RISK ADAPTED TARGETED PREVENTION

Faiza Gaba, Oleg Blyuss, Jatinnderal Kalsi, Saskia Sanderson, Andrew Wallace, Antonis C. Antoniou, Rosa Legood, Usha Menon, Ian Jacobs, & Ranjit Manchanda, on behalf of the PROMISE-FS team

Introduction/Background The current approach to genetic-testing and risk assessment is based on family-history and misses the majority of people at risk. Unselected population-based testing can enable personalised ovarian cancer (OC) risk prediction combining genetic/epidemiology/hormonal data. This permits population risk stratification for risk adapted targeted screening and prevention. Such an intervention study has not previously been undertaken. We aimed to assess the feasibility of OC risk stratification of general population women using a personalised OC risk tool followed by risk management.

Methodology Volunteers were recruited through London primary care networks. Inclusion criteria: women ≥18 years. Exclusion criteria: prior ovarian/tubal/peritoneal cancer, previous genetic testing for OC genes. Participants accessed an online/web-based decision aid along with optional telephone helpline use. Consenting individuals completed risk assessment and underwent genetic testing (BRCA1/BRCA2/RAD51C/RAD51D/BRIP1, OC susceptibility single-nucleotide polymorphisms). A validated OC risk prediction algorithm provided a personalised OC risk estimate using genetic/lifestyle/hormonal OC risk factors. Population genetic testing (PGT) for OC-risk stratification uptake/acceptability, satisfaction, decision aid/telephone helpline use, psychological health and quality of life were assessed using validated/customised questionnaires over six months. Linear-mixed models/contrast tests analysed impact on study outcomes. Main outcomes: feasibility/acceptability, uptake, decision aid/telephone helpline use, satisfaction/regret, and impact on psychological health/quality of life.

Results In total, 123 volunteers (mean age = 48.5 (SD = 15.4) years) used the decision aid, 105 (85%) consented. None fulfilled NHS genetic-testing clinical criteria. OC-risk stratification revealed 1/103 at ≥10% (high), 0/103 at 5%–<10% (intermediate), and 100/103 at ≤5% (low) lifetime OC risk. Decision aid satisfaction was 92.2%. The telephone helpline use rate was 13% and the questionnaire response rate at six months was 75%. The high-risk woman underwent surgical prevention. Contrast tests indicated that overall depression (p=0.30), anxiety (p=0.10), quality-of-life (p=0.99), and distress (p=0.25) levels did not jointly change, while OC worry (p=0.021) and general cancer risk perception (p=0.015) decreased over six months. In total, 85.5%–98.7% were satisfied with their decision.

Conclusion Findings suggest population-based personalised OC risk stratification is feasible and acceptable, has high satisfaction, reduces cancer worry/risk perception, and does not negatively impact psychological health or quality-of-life. Larger implementation studies evaluating long-term impact and cost effectiveness of this strategy are needed.

Disclosures RM- funding from CRUK & Eve Appeal for this work. Funding from Barts Charity, Rosetrees trust outside this work. Honorarium from Astrazeneca & MSD.

IJ, UM- Financial interest in Abodyda, company for development of biomarkers for early detection of cancer. Other authors- No disclosures.

ATTITUDES TOWARDS RISK REDUCING EARLY SALPINGECTOMY WITH DELAYED OOPHORECTOMY FOR OVARIAN CANCER PREVENTION: A COHORT STUDY

Faiza Gaba, Oleg Blyuss, Rosa Legood, Louise Izzat, Vishakha Tripathi, Kalpana Ragupathy, Robin Crawford, D Gareth Evans, Usha Menon, Ranjit Manchanda, Wolfson Institute of Preventive Medicine, Barts Health NHS Trust; Gynaecological Oncology, Barts Health NHS Trust; Wolfson Institute of Preventive Medicine, London School of Hygiene and Tropical Medicine; Department of Health Services Research and Policy, University of New South Wales; Department of Women's Health; Wolfson Institute of Preventive Medicine, Barts Cancer Centre, Queen Mary University of London; Department of Gynaecological Oncology, Barts Health NHS Trust

Introduction/Background With increasing evidence and acceptability of the central role of the fallopian-tube in the etiopathogenesis of epithelial ovarian cancer (OC), risk-reducing early-salpingectomy-and-delayed-oophorectomy (RRSEDO) has been proposed as a two-stage surgical alternative to risk reducing salpingo-oophorectomy (RRSO). RRSEDO offers some level of risk reduction to women who decline/wish to delay RRSO whilst conserving ovarian function and avoiding detrimental consequences of premature-menopause. However, prospective outcome data for RRSEDO are lacking. The aim of this study was to determine RRSEDO acceptability and effect of surgical prevention on menopausal sequelae/satisfaction/regret in women at increased OC risk.

Methodology UK Multicentre, cohort, study (IRCTN:12310993). OC unaffected UK women ≥18 years, at increased OC-risk, with/without previous RRSO, ascertained through specialist familial-cancer/genetic-clinics and BRCA support groups. High-risk women completed a 39-item customised questionnaire developed through literature review, expert clinician and patient support groups’ involvement. Baseline characteristics were described using descriptive statistics. Logistic/linear-regression models analysed impact of variables on RRSEDO acceptability and health-outcomes. Main outcomes were RRSEDO acceptability, barriers/facilitators, menopausal-sequelae, satisfaction/regret.

Results 346 of 683 participants underwent risk-reducing salpingo-oophorectomy (RRSO) and 337 did not. 69.1% (181/262) premenopausal women who had not undergone RRSO found it acceptable to participate in a research study offering RRSEDO. Premenopausal women concerned about sexual-dysfunction were more likely (OR=2.9, 95%CI=1.2–7.7, p=0.025) to find RRSEDO acceptable. Women experiencing sexual-dysfunction after premenopausal-RRSO were more