

participate. The conclusions of local governance and risk management reviews will be pooled and evaluated in order to develop an audit-informed rolling action plan suitable for local implementation.

This presentation will focus on Quality improvement projects currently being undertaken by the Clinical Quality team at the RCOG.

OP5.02

A retrospective observational study of the causes and treatment of recurrent early pregnancy loss

Heidi Gauci Grech, Mark Formosa

Recurrent Miscarriage Clinic, Mater Dei Hospital

Introduction: This is a retrospective observational analysis of 232 patients who attended the clinic over the past 5 years. The conditions associated with recurrent pregnancy loss and the effect the treatment protocols employed were studied.

Methods: A standard detailed obstetric, gynaecological and medical history was taken in every case. A standard investigation protocol was then applied to all patients. Depending on the results each couple was advised a treatment protocol. Data of the outcome of the pregnancies immediately following the miscarriage has been collected.

Results: Idiopathic No: 91 Live births: 54 Miscarriages: 13 Polycystic Ovarian Syndrome No: 7 Live births: 5 Miscarriages: 1 Luteal phase deficiency No: 4 Live births: 3 Miscarriages: 1 Endocrine No: 4 Live births: 4 Miscarriages: 0 Anatomical abnormalities No: 5 Live births: 3 Miscarriages: 0 Genetic defects No: 4 Live births: 3 Miscarriages: 0 Thrombophilia Acquired No: 13 Live births: 8 Miscarriages: 2 Inherited Protein S deficiency No: 2 Live births: 2 Miscarriages: 0 Protein C deficiency No: 1 Live births: 0 Miscarriages: 0 Factor V mutation No: 1 Live births: 0 Miscarriages: 1 Factor H mutation No: 3 Live births: 3 Miscarriages: 0 MTHFR double heterozygote No: 26 Live births: 14 Miscarriages: 5 MTHFR homozygote No: 26 Live births: 15 Miscarriages: 3 Combined thrombophilia No: 24 Live births: 18 Miscarriages: 13 Combined Pathology Not: 18 Live births: 10 Miscarriages: 3

Conclusion: This study of 232 patients indicates that the process of investigating and offering treatment to patients with a history of recurrent miscarriages leads to positive results.

OP5.03

Awareness of the human papillomavirus (HPV) and HPV vaccines

Bettina von Brockdorff, Lilian M Azzopardi,

Anthony Serracino Inglott

University of Malta

Introduction: The aim of this study were to investigate the impact of the use of HPV vaccines in the health care system through the perception and awareness of HPV and the HPV vaccine amongst female patients, gynaecologists and pharmacists.

Methods: Two, self-administered questionnaires for doctors and pharmacists and for patients who visit gynaecology outpatients' clinic at Mater Dei Hospital (MDH) and fifteen community pharmacies. Fifteen community pharmacies were chosen by stratified random sampling and questionnaires were distributed to ten patients per pharmacy and managing pharmacists. Questionnaires were also distributed to gynaecology specialists at MDH.

Results: From the 115 patients recruited, the majority of patients had heard of the HPV virus (53.6%) and HPV vaccines (52.3%). 88.5% who were aware of the HPV virus and HPV vaccines were also aware of the association between the HPV

virus and cervical cancer and 73.7% of participants stated that they carry out regular cervical smear tests every two years. Thirteen gynaecologists completed the questionnaires and five stated that over one month they vaccinated between three to five patients. Eight provide information to patients regarding HPV vaccines. All participating gynaecologists and managing pharmacists agreed on the presence of HPV vaccines in the local healthcare system.

Conclusion: The awareness regarding HPV and HPV vaccines has improved compared to data reported in an earlier local study undertaken in 2012 by Brincat et al. A reason for this, could include the fact that since 2012, HPV vaccines have been implemented in the health care system.

OP5.04

The role of cytokines in cutaneous aging during menopause

Marika Borg¹, Jean Calleja-Aguis²

¹Mater Dei Hospital, ²Department of Anatomy, Faculty of Medicine and Surgery, University of Malta; Department of Obstetrics and Gynaecology, Mater Dei Hospital

Introduction: Skin aging is one of the complications of menopause that affects most women. Several cytokines are involved in the aging process. Cytokines in the skin are produced by epithelial cells and keratinocytes, besides Langerhans cells as part of the immune system. Aim: To understand the physiological process of cutaneous aging and the role of cytokines in skin aging during menopause with the decline of oestrogen.

Methods: A systematic review was conducted to identify the imbalance of pro- and anti-inflammatory cytokines which bring about the aging process resulting in dry wrinkled skin which bruises easily, delayed wound healing and body hair loss.

Results: A significant rise in the level of pro-inflammatory cytokines Tumour Necrosis Factor-alpha (TNF- α), Interleukin (IL)1 and IL6 occurs in menopause which drives the aging process. With the decrease in oestrogen in menopause the level of B and CD4 Tlymphocytes decreases, natural killer cells' cytotoxic activity declines, and the response of cells to cytokines increases. TNF α increases collagen degradation through increased production of MMP9 while inhibiting collagen synthesis, and lowers skin immunity thus the risk of skin infections in older age increases. Other cytokines involved include Transforming Growth Factor-beta (TGF β), cysteine-rich protein 61 (CCN1), IL8, IL10, IL18 and interferons.

Conclusion: The use of oestrogen in menopause increases the thickness of skin dermis, collagen content and skin elasticity. Further research is necessary to establish the role of cytokines in the prevention and treatment of skin aging.

OP5.05

Serum cytokines in Maltese women with miscarriage

Christina Xerri¹, Edith Said², Jean Calleja-aguis³

¹University of Malta, ²Department of Anatomy, Faculty of Medicine and Surgery, University of Malta; Cytogenetics Laboratory, Department of Pathology, Mater Dei Hospital, ³Department of Anatomy, Faculty of Medicine and Surgery, University of Malta

Introduction: Spontaneous miscarriages include pregnancy loss from the time of conception up to 24 weeks of gestation. More than 50% of first trimester miscarriages and 30% of second trimester miscarriages are caused by fetal chromosomal aberrations. It is assumed that chromosomally abnormal miscarriages are affected through different mechanisms than chromosomally normal miscarriages.

Karyotypically abnormal miscarriages may be due to local functional disturbances while normal karyotype miscarriages may be the result of fetal rejection due to a maternal systemic inflammation. Cytokines play a crucial role in the maintenance of pregnancy by regulating and modulating the immune system. Recent studies reveal that in normal karyotype miscarriages there is cytokine production in the maternal circulation linked to a Thelper (TH)-1 cell type immunity. Pro-inflammatory cytokines tumor necrosis factor α (TNF- α) and interferon γ (IFN- γ) are amongst the cytokines that are considered detrimental to pregnancy, while anti-inflammatory cytokines interleukin (IL)-4, 6 and 10 enhance embryonic development.

Methods: In total, 25 miscarriages have been karyotyped using conventional cytogenetic techniques. Maternal sera collected at the time of miscarriage (n=60) will be assayed with Quantikine® ELISA kits to detect, quantify and compare serum cytokine levels: TNF α , IFN γ , IL10 and transforming growth factor β 1 (TGF β 1). Comparison will be made between serum cytokine levels in women undergoing miscarriage (n=40), women experiencing recurrent miscarriage (RM) (n=20) and women with a history of RM (n=20).

Conclusion: The karyotype and cytokine results will be presented to establish a possible correlation between cytokine levels in women experiencing miscarriage or RM, and fetal karyotype.

OP5.06

COPD as a multisystem condition

George Cremona

COPD is characterized by a poorly reversible airflow limitation resulting from chronic inflammation, mainly due to tobacco exposure. Patients with COPD are increasingly recognized to be at risk for several co-morbid conditions, including cachexia, muscle weakness, lung cancer, coronary artery disease, heart failure, and bone mineral density loss. The extrapulmonary co-morbidities significantly complicate the management and influence the prognosis of patients with COPD. Although certain co-morbidities like cardiovascular diseases share some risk factors with COPD, such as cigarette smoking, other frequently observed co-morbidities, including musculoskeletal wasting, metabolic syndrome, and depression, cannot be easily attributed to smoking. There is increasing evidence that chronic inflammation is a key factor in COPD and that inflammation might be the common pathway linking these co-morbidities. The treatment of COPD must also include these co-morbidities and likewise patients with co-morbid conditions should be screened and treated for COPD with the aim of improving both symptoms and prognosis.

OP5.07

Predictors of inhaler technique in asthma and COPD

Kyra Bartolo¹, Michael Pace Bardon², Emma Louise Schembri¹, Simon Mifsud¹, Darlene Muscat², Rachelle Asciale¹, Michael Sullivan¹, Stephen Montefort², Martin Balzan²

¹Department of Medicine, ²Department of Respiratory Medicine

Introduction: Correct inhaler technique (pMDI, with/without spacer) is essential for effective management of asthma and COPD. AIM to assess inhaler technique using two different scores, one expecting 10 correct steps out of twelve and another none of 4 critical errors.

Methods: 164 patients (Male 45.7%, Mean age 57.9, 78% asthma, 22% COPD) were recruited. Regular follow up by respiratory physician 61%, GP 46.3%, none 12.8%. A structured questionnaire was administered and technique formally assessed by one of 5 medical practitioners.

Results: 108 (65.9%) got 10 out 12 steps correct, 56 (34.1%) had no critical errors. No critical errors seemed to be associated with a decrease in oral steroid use in the previous year with an odds ratio OR of 0.52(0.23-1.17, p=0.1); while 10 correct steps OR 1.45(0.66-3.2, p=0.36) failed to predict any difference, after correcting for age, gender and vaccination history. In a multivariate model using 30 predictors of no critical errors, Asthma diagnosis OR 3.91(1.16-12.07, p<0.06); Diabetes OR 4.2(1.45-12.2, p<0.06), Education on scale of 14, OR 1.35(0.95-1.94, p=0.09); married status OR 2.06(0.96-4.45, p=0.05) were positive predictors, while Hypercholesterolemia OR 0.35(0.14-0.88, p=0.18). Critical errors, 31.7% failed to shake the inhaler, 45.1% failed to exhale before inhalation, 18.9% failed to coordinate activation with inspiration, while 40.2% failed to hold their breath for 10 seconds.

Conclusion: The presence of no critical error predicted less use of oral steroids in the previous year. Education and married status, and asthma were positive predictors. Co-morbidities, surprisingly, seem to have an independent effect on absence of critical errors.

OP5.08

An audit on the effect of a hospital oxygen therapy guideline on prescription and administration of oxygen therapy

Rachelle Asciale¹, Maria Ciantar², Julia Tua¹, Caroline Gouder¹, Valerie Anne Fenech¹, Stephen Montefort¹

¹Department of Medicine, Mater Dei Hospital, ²University of Malta

Introduction: Aim: to assess the effect of a hospital oxygen therapy guideline on oxygen prescription and administration at the Emergency Department (ED) and medical wards of Mater Dei Hospital.

Methods: Data was collected on oxygen prescription and administration in patients attending the ED with conditions most likely to require oxygen therapy. Z test was used to compare results of a similar audit in 2011 to results after the hospital guideline implementation in 2015.

Results: In patients in whom oxygen was indicated: Oxygen administration at the ED improved from 23.5% to 97.5% (p<0.05); flow rate and delivery device were documented in 47.9% before, and 72.5% after guideline (p<0.05). Oxygen therapy prescription in management plans improved from 34.1% to 95% (p<0.05). Oxygen was prescribed in treatment charts in 51.8% before and 25% after guideline. Oxygen was administered in wards in 98.4% before and 85% after guideline, ie 15% of patients requiring supplemental oxygen did not receive it. After guideline implementation: 19.7% of patients in whom supplemental oxygen was not indicated were prescribed oxygen therapy, 96.6% of these received oxygen therapy in wards. For patients in whom oxygen was prescribed including flow rate and delivery device (whether oxygen was indicated or not), oxygen was received correctly in ward in 7.1% before and 63.5% after guideline (p<0.05); received incorrectly or not at all in 92.9% before and 36.5% after guideline (p<0.05).

Conclusion: Oxygen therapy prescription and documentation at the ED improved significantly. Oxygen therapy administration in wards has improved, although prescription of oxygen in treatment charts needs improvement.