The MOSAICC Study - Methodology


Document Version:
Peer reviewed version

Queen's University Belfast - Research Portal:
Link to publication record in Queen's University Belfast Research Portal

General rights
Copyright for the publications made accessible via the Queen's University Belfast Research Portal is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy
The Research Portal is Queen's institutional repository that provides access to Queen's research output. Every effort has been made to ensure that content in the Research Portal does not infringe any person's rights, or applicable UK laws. If you discover content in the Research Portal that you believe breaches copyright or violates any law, please contact openaccess@qub.ac.uk.

Download date:11. Jan. 2019
Introduction

• The myeloproliferative neoplasms (MPNs) are a rare heterogeneous group of diseases.
• Characterised by an overproduction of both mature and immature blood cells of the myeloid lineage.
• The JAK2V617F mutation is central to all three disease entities.
• Newly discovered CALR mutation accounts for JAK2/MPL negative MPN genetic profiles.

• The aetiology of these disease entities remains unknown.
• A systematic review conducted by Anderson et al. 2011, identified ethnic, occupational, medical and environmental risk factors.
• The paucity of data investigating MPN aetiology warranted the need for an exploratory case-control study.

Study Aim

• Evaluating;
  - Recruitment and response rates by randomisation of;
    • Monetary incentive
    • MPD Voice Trolley token
    • MOSAICC branded pen / plain pen / no
  - Administering a telephone questionnaire using Skype and Qualtrics software.
  - Assessment of occupational exposure using OccIDEAs and comparing this to FINJEM software.
  - Collection of saliva, blood spots and venous blood samples for DNA extraction and quantification and toe-nail samples for elemental analysis.
  - Utilising the myeloproliferative neoplasm symptom assessment form (MPN-SAF) to assess quality of life.
  - Methodological aspects to develop and optimise protocol for a future, multi-centred, UK-wide study investigating the aetiology of MPNs.

OccIDEAs

• A web-based application using expert exposure methods to assign exposure status by predefined algorithms for specific occupations.

Agents which can be assessed using OccIDEAs software;
  - Adhesives (solvent glues, contact adhesives)
  - Blood borne pathogens
  - Combustion products (diesel exhaust, petrol exhaust, other exhausts, other PAHs)
  - Fertilizers (mineral, natural)
  - Formaldehyde
  - Inorganic dusts (asbestos, fibreglass, silica, other inorganic fibres/dusts)
  - Metals (lead, other toxic metals)
  - Nitrosamines
  - Oils (natural, mineral, synthetic)
  - Organic dusts (wood, grain, cotton, other organic dusts)
  - Polychlorinated biphenyl (PCBs)
  - Pesticides (organochlorines, organophosphates, phenoxy herbicides, other herbicides, other pesticides)
  - Pigments (paints, dyes, other pigments)
  - Radiation (ionizing radiation, UV, ELF, RF)
  - Resins (acrylamide, resins)
  - Shift work, jetlag
  - Solvents (benzene, other aromatic solvents, chlorinated solvents, aliphatic solvents, alcohol)
  - Sterilizing agents (ethylene oxide, other sterilizing agents)

MOSAICC Study Recruitment to date

• 189 participants recruited;

89 Cases
39 GP Controls
61 Friend/Family Controls

UK WIDE STUDY PLANNED FOR 2014/15