PPS

Pleural Plaque Study

An ecological study of pleural plaques in the UK

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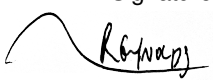
Protocol authorised by:

Name & Role	Date	Signature
Carl Reynolds, Chief Investigator	7th August, 2017	

Study management group

Chief Investigator: Carl Reynolds
Co-investigators: Paul Cullinan
Statistician: Carl Reynolds
Study Management: Paul Cullinan, Carl Reynolds

Study Coordination Centre

For general queries, supply of study documentation, and collection of data, please contact:

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Clinical Queries

Clinical queries should be directed to Dr Carl Reynolds who will direct the query to the appropriate person.

Sponsor

Imperial College London is the main research Sponsor for this study. For further information regarding the sponsorship conditions, please contact the Head of Regulatory Compliance at:

Joint Research Compliance Office
Imperial College London & Imperial College Healthcare NHS Trust
2nd Floor Medical School Building
St Marys Hospital Praed Street London W2 1NY
Tel: 020759 41862

Funder

No external funding is required.

This protocol describes the Pleural Plaque Study (PPS) and provides information about procedures for entering participants. Every care was taken in its drafting, but corrections or amendments may be necessary. These will be circulated to investigators in the study. Problems relating to this study should be referred, in the first instance, to the Chief Investigator. This study will adhere to the principles outlined in the NHS Research Governance Framework for Health and Social Care (2nd edition). It will be conducted in compliance with the protocol, the Data Protection Act and other regulatory requirements as appropriate.

Contents

Glossary

Asbestos Asbestos is a mineral fibre with useful insulating properties. Asbestos use is now strictly controlled because of harmful health effects. Historically, construction materials and household goods have been made from asbestos, and widely used, in the United Kingdom.

Ecological study An ecological study is an observational study defined by the level at which data are analysed, namely at the population or group level, rather than individual level.

Pleural plaque Pleural plaques are discrete circumscribed areas of hyaline fibrosis of the parietal pleura and occasionally the visceral pleura. Asbestos exposure is the predominant cause of pleural plaques.

Key words

Idiopathic pulmonary fibrosis, asbestos, epidemiological study

Study Summary

Title: Pleural Plaque Study (PPS).

Design: Ecological study.

Aim: To characterize and measure changes in the distribution of CT reported pleural plaques in the population over time.

Outcome measures: 1. Standardised incidence ratio for pleural plaque by postcode area and year of report. 2. Correlation with pleural mesothelioma mortality data. 3. Correlation with historic asbestos import data.

Population: Patients with a CT scan report documenting pleural plaque at participating centres.

Eligibility: Meets population definition.

Duration: One year.

1 Introduction

1.1 Background

Pleural plaques are seen on chest radiograph or CT scan as well-demarcated areas of pleural thickening which may contain calcification. Viewed with a microscope pleural plaques are relatively acellular, have a hylanized appearance, and are composed of dense layers of collagen.[1]

At a population level pleural plaques are important because they are sensitive and specific for asbestos exposure and identify a population at increased risk of asbestos related disease.[2;3] At an individual level pleural plaques are of variable significance; they are usually asymptomatic and the risk of asbestos related disease depends on latency period, duration of exposure, level of exposure and cumulative exposure.[4;5]

The advent of electronic radiology information systems (RIS) to store radiology reports makes epidemiological analysis of pleural plaques (as reported by a radiologist) feasible.

Epidemiological analysis of pleural plaques is desirable for several reasons:

1. To enhance management of patients with pleural plaques
2. To provide additional information on the likely course of the European mesothelioma epidemic[6]
3. To identify unwarranted variation is pleural plaque diagnosis

2 Study objectives

My overall aim is to characterize and measure changes in the distribution of pleural plaques over time; additionally, I will investigate correlations with pleural mesothelioma mortality data and historic asbestos import data.

My specific research questions are:

1. What is the prevalence and incidence of CT scan reported pleural plaque in the UK by age, sex, geographic region, and year of report?
2. Does CT scan reported pleural plaque correlate with pleural mesothelioma mortality data?
3. Does CT scan reported pleural plaque correlate with historic asbestos import data?

3 Study design

3.1 Study outcome measures

Primary outcome Standardised incidence ratio for pleural plaque by postcode area and year of report.

Secondary outcomes Correlation with pleural mesothelioma mortality data. Correlation with historic asbestos import data.

4 Participant entry

4.1 Pre-registration evaluations

No pre-registration evaluations are necessary.

4.2 Sampling

All patients having a CT scan report that includes the term “pleural plaque” or “pleural plaques” at participating centres will be sampled.

4.3 Inclusion criteria

Has a CT scan report that includes the term “pleural plaque” or “pleural plaques” at a participating centre.

4.4 Exclusion criteria

There are no exclusion criteria.

4.5 Withdrawal criteria

There are no withdrawal criteria.

5 Adverse events

5.1 Definitions

Adverse Event (AE): any untoward medical occurrence in a patient or clinical study subject.

Serious Adverse Event (SAE): any untoward and unexpected medical occurrence or effect that:

- Is life-threatening refers to an event in which the subject was at risk of death at the time of the event; it does not refer to an event which hypothetically might have caused death if it were more severe
- Requires hospitalisation, or prolongation of existing inpatients hospitalisation
- Results in persistent or significant disability or incapacity
- Is a congenital anomaly or birth defect

Medical judgement should be exercised in deciding whether an AE is serious in other situations. Important AEs that are not immediately life-threatening or do not result in death or hospitalisation but may jeopardise the subject or may require intervention to prevent one of the other outcomes listed in the definition above, should also be considered serious.

5.2 Reporting Procedures

All adverse events should be reported. Depending on the nature of the event the reporting procedures below should be followed. Any questions concerning adverse event reporting should be directed to the Chief Investigator in the first instance.

5.2.1 Non serious AEs

An SAE form should be completed and emailed to the Chief Investigator within 24 hours.

All SAEs should be reported to the Imperial College London where in the opinion of the Chief Investigator, the event was:

- related, ie resulted from the administration of any of the research procedures; and
- unexpected, ie an event that is not listed in the protocol as an expected occurrence

Reports of related and unexpected SAEs should be submitted within 15 days of the Chief Investigator becoming aware of the event, using the NRES SAE form for non-IMP studies. The Chief Investigator must also notify the Sponsor of all SAEs.

Local investigators should report any SAEs as required by their Local Research Ethics Committee, Sponsor and/or Research & Development Office.

Contact details for reporting SAEs:
Email: carl.reynolds@imperial.ac.uk
Please send SAE forms to:
National Heart and Lung Institute
Room G39 Emmanual Kaye Building
1b Mansrea Road, London, SW3 6LR
Tel: 07737 904 807

6 Assessment and follow up

Pseudo-anonymised information about participants (that they have a pleural plaque, the year of the report, their year of birth, and their postcode area will be held for until the analysis is complete.

7 Statistics and data analysis

The prevalence and incidence of pleural plaques by age, sex, and geographic region will be calculated. Correlations with pleural mesothelioma and asbestos import data will be examined.

8 Regulatory issues

8.1 Ethics approval

The Chief Investigator has obtained approval from the Research Ethics Committee via IRAS. The study must be submitted for Site Specific Assessment (SSA) at each participating NHS Trust. The Chief Investigator will require a copy of the Trust R&D approval

letter before accepting participants into the study. The study will be conducted in accordance with the recommendations for physicians involved in research on human subjects adopted by the 18th World Medical Assembly, Helsinki 1964 and later revisions.

8.2 Consent

We will apply to the consent advisory group (CAG) for permission to obtain and analyze pseudo-anonymised data extracts without patient consent.

8.3 Confidentiality

The Chief Investigator will preserve the confidentiality of participants taking part in the study and is registered under the Data Protection Act.

8.4 Indemnity

Imperial College London holds negligent harm and non-negligent harm insurance policies which apply to this study.

8.5 Sponsor

Imperial College London will act as the main Sponsor for this study. Delegated responsibilities will be assigned to the NHS trusts taking part in this study.

8.6 Funding

No external funding is required.

8.7 Audits and inspections

The study may be subject to inspection and audit by Imperial College London under their remit as sponsor and other regulatory bodies to ensure adherence to GCP and the NHS Research Governance Framework for Health and Social Care (2nd edition).

9 Study management

The day-to-day management of the study will be co-ordinated through Dr Carl Reynolds.

10 Publication policy

All research findings will be published in accordance with the Wellcome Trust and Imperial College London open access publication policies.

Appendix A Research outputs

Appendix B Study flow chart and Gannt chart

Appendix C Study standard operating procedure

References

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