

## Case study

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### Case

Mr. Jones, a 53 year-old worker in Ni-Cd battery production visited his physician due to coughing up blood several times during the previous day. Apart from the coughing up blood episode, Mr. Jones mentioned that he coughs every day for years and that he is a chain smoker, smoking more than 30 cigarettes per day for almost 15 years. He claimed that he had shortness of breath and that he could not manage physically demanding activities. He noticed that since he is living on the second floor in last three months he needs a break on the first floor in order to reach his apartment. During the history taking his physician got information that Mr. Jones is working in the Ni-Cd battery production for 31 years. The first 24 years he was working in the production and the last 7 years he is a foreman in Ni-Cd battery production. His job position includes mostly managing production workers and occasional work in production (in case of production problems). Data on workplace exposure were not available to the consulted physician.

Physical examination revealed that Mr. Jones has dyspnoea and chest wheezing during breathing. Laboratory findings indicate increased sedimentation rate, decreased number of erythrocytes and decreased blood iron levels. Spirometry indicates decreased FVC and FEV1. Based on anamnesis, physical examination and laboratory findings, the physician decided to perform a chest X-ray, which revealed a massive tumour in lower part of right lung with exudation in right lung.

After detailed examination (including CT, MRI, bronchoscopy etc) Mr. Jones underwent surgery and chemotherapy. Three years after the treatment Mr. Jones has been asked by his employer to continue his work as a foreman in Ni-Cd battery production. He visited the occupational health specialist which had several dilemmas.

#### Questions related to this case

- To what toxic agent could Mr. Jones be exposed?
- What is its main route of exposure and elimination of that toxic agent?
- What is the pathway of damage?
- What could be done in prevention?
- Is it a case of non recognized occupational disease?
- What are the steps to conclude/exclude occupational origin?
- Is it feasible to continue working as foreman in Ni-Cd battery production?