The epidemiological surveillance of malignant mesothelioma in Italy (1993-2015): methods, findings, and research perspectives

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Background: as a legacy of the large asbestos consumption until the definitive ban in 1992, Italy had to tackle a real epidemic of asbestos related diseases. The Italian National Registry of Malignant Mesotheliomas (ReNaM) is a permanent surveillance system of mesothelioma incidence, with a regional structure. Aims, assignments and territorial network of ReNaM are described, as well as data collection, recording and coding procedures.

Objectives: to describe the Italian epidemiological surveillance system of mesothelioma incidence, to provide updated data about occurrence of malignant mesothelioma in Italy, and to discuss goals, attainments, and expectations of registering occupational cancer.

Design: analysis of data by malignant mesothelioma incident cases surveillance system.

Setting and participants: Italy, network of regional surveillance system, all Italian regions.

Main outcome measures: a Regional Operating Centre (COR) is currently established in all the Italian regions, actively searching incident malignant mesothelioma cases from health care institutions. Occupational history, lifestyle habits, and residential history are obtained using a standardized questionnaire, administered to the subject or to the next of kin by a trained interviewer. The extent of dataset, epidemiological parameters, and occupations involved are reported updated at 31.12.2016, and standardized incidence rates are calculated.

Results: at December 2016, ReNaM has collected 27,356 malignant mesothelioma cases, referring to the period of incidence between 1993 and 2015. The modalities of exposure to asbestos have been investigated for 21,387 (78%) and an occupational exposure has been defined for around 70% of defined cases (14,818).

Conclusions: the Italian experience shows that epidemiological systematic surveillance of asbestos related diseases incidence has a key importance for assessing and monitoring the public health impact of occupational and/or environmental hazards, programming preventive interventions, including remediation plans and information campaigns, and supporting the efficiency of insurance and welfare system. Monitoring the incidence of malignant mesothelioma through a specialized cancer registry is essential to follow-up the health effects of changing modalities and extent of occupational exposures over years and of environmental contamination. Such consolidated surveillance system is recommended also for occupational cancers with low aetiological fraction.