

Occupational risk factors for renal cell cancer. An Italian case-control study

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KEY WORDS

Solvents; pesticides; metals; copper sulphate

SUMMARY

Aim: To examine possible associations between occupational and environmental risk factors and renal cell cancer (RCC), a tumour with unclear aetiology and increasing incidence. **Methods:** A questionnaire-based case-control study of 100 histologically verified cases of RCC and 200 controls was conducted at Parma University Hospital. The control group was enrolled from patients attending different outpatient departments and represented the same residential area as the cases. For all exposure variables under study, two levels of duration were defined: "short" and "prolonged" for less than 10 years or more, respectively. **Results:** The highest risk estimates for RCC were found for "prolonged" exposure to organic solvents with an odds ratio (OR) of 2.2 (95% confidence interval, CI: 1.0-4.8). "Prolonged" exposures to pesticides and copper sulphate were also associated with increased risk, OR 2.0 (95% CI: 0.8-4.7) and OR 2.7 (95% CI: 1.3-5.5), respectively. **Conclusions:** Our data suggests an association between RCC and exposure to organic solvents, pesticides and copper sulphate. A risk gradient as a function of exposure duration was found for organic solvents ($p=0.044$) and copper sulphate ($p=0.036$), but not for pesticides.

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