17 TIME TO PREGNANCY STUDY IN MALE WORKERS EXPOSED TO CARBON DISULFIDE IN THE RAYON INDUSTRY

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Objectives The aim of study was to investigate whether exposure to carbon disulfide (CS_2) has an impact on couple fecundability.

Methods A total of 56 male workers in the rayon industry were recruited in this retrospective cohort study. We used time to pregnancy (TTP) as a measure of couple fecundability, which was defined as the duration between the dates of discontinuing contraceptive procedures and beginning of last menstrual period before pregnancy, and used a structured questionnaire to interview each male worker and his spouse. We conducted the exposure assessment of CS_2 using previously air-sampling data. Finally, we analysed the data of TTP using the discrete Cox's proportional hazards model.

Results The pregnancies with the employment of 10 years or more had a lower fecundability density ratio (FDR=0.47; 95% CI: 0.23 to 0.93) and those exposed more than 30 ppm had a lower ratio (FDR=0.58; 95% CI: 0.26 to 1.29) compared to those before the employment. Furthermore, workers exposed more than 30 ppm and their employment of 10 years or more were associated with a decreased fecundability density ratio (FDR=0.42; 95% CI: 0.19 to 0.93).

Conclusions The results showed that the exposure to CS_2 had a significantly detrimental effect on male fecundability, especially for those with long duration and high level of CS_2 exposure.