

REPORT OF THE CAUSE OF ILLNESS AND DEATH OF MR. GUERRINO DANESIN, FORMER
EMPLOYEE AT THE PANSAC FACTORY, MIRA (VENICE)

R&S 002456

Working history

1967-1975: employed at a chemical factory (PANSAC) assigned to the plastics extrusion department, including PVC with risk of exposure to vinyl chloride.

1976-1983: employed in commercial sector

Pathological history

17.3.1983: violent continuous pain in right hypochondriac region, aggravated by inspiration and decubitus on right side. Contraction of diuresis, with dark coloured urine. Dyspnoea at rest.

Hospitalization

26.3.1983: Admitted to 2nd Medical Division of "G.B. Giustiniani" Hospital, Venice. The findings were:

- slightly globose abdomen
- liver: lower border extending beyond the transverse umbilical line, hard, lumpy, non-painful;
- slight ascitic stratum on percussion;
- evident oedema of lower limbs
- chest X-ray: small pleural type opacities in left costophrenic recess. Slight upward shift of right hemidiaphragm";
- Abdomen X-ray: "barium in colon, from previous digestive tract x-ray. No pathognomic signs revealed in abdomen";

Laboratory tests confirm anaemia, leukocytosis and changes in liver function tests.

29.3.1983: Cytologic examination of ascitic liquid reveals "various erythrocytes, some lymphocytes and various mesothelial cells with regular morphology. Here and there, some dyskaryotic and dyschromic elements and some nucleolated nuclear shadows. No evidence of definitely neoplastic cells".

- X-ray of abdomen: "considerably enlarged liver area".

31/3/1983: liver biopsy performed;

1/4/1983 : Esophagogastroduodenoscopy reveals no evident changes;

2/4/1983 : Result of histopathological examination of liver biopsy:
"Cholangio-cellular carcinoma";

6/4/1983 : Patient died at 20.40 h.

9/4/1983 : Post-mortem: Anatomico-pathological diagnosis: "hemoperitoneum due to rupture of sub-glissonian neoplastic nodules in subject with liver carcinoma spreading over entire visceral cavity; right broncho-pneumonia in a state of red-grey hepatization and lung oedema; torbid, fatty, polyvisceral pathosis.

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Histopathological diagnosis

28/4/1983: about half of the liver sample taken at post-mortem was sent to Prof. C. Maltoni, Director of Institute of Oncology, Bologna, for histopathological examination.

This liver sample, which was fixed in formalin, showed a greenish parenchyma on which many whitish nodules were easily discerned. The nodules varied from 0.3 to 8 cm in size and 160 were counted. Histological preparations were made, stained with Hematoxylin-Eosin, according to Papanicolao, Van Gieson, Mallory, Azan, Gomori, PAS, Alcian PAS.

30/4/1983 : Microscopic examination of the preparations showed: Multicentric liver angiosarcoma. In the liver parenchyma surrounding the angiosarcomatous areas, many alterations could be seen that are characteristic of the liver of experimental animals and of workers exposed to vinyl chloride: peliosis, hyperplasia of liver cells and hyperplasia and dysplasia of the sinusoid lining cells (angio-blasts).

The pathologist at the "G.B. Giustiniani" Hospital in Venice also performed histological examination of the liver samples taken at post mortem and agreed with Prof. Maltoni's diagnosis. (telephone conversation).

Conclusions

Considering:

- the experimental and epidemiological data in the literature which establish a direct correlation between vinyl chloride exposure and liver angiosarcoma;
- that this form of neoplasm is rare;
- that Mr. Guerrino Danesin had in fact been exposed to vinyl chloride;
- that the length of exposure and latency period agree with data reported in the literature;
- that a previous case of liver angiosarcoma occurred at the same factory (two cases of this rare tumour in the same group of workers cannot in any way be considered to be due to chance);

it is concluded that the liver tumour that occurred in Mr. Guerrino Danesin was an angiosarcoma associated with occupational exposure to vinyl chloride.

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