

by Dr. L. Henry

Name of deceased Redacted - EU PII
 Age Redacted - EU PII Occupation Farm Worker
 Time of death (a) known Redacted - EU PII or (b) estimated _____
 Date and time of examination 10/5/76 11.0 a.m.
 Place where performed The Mortuary, Redacted - EU PII
 Observers present Redacted - EU PII

External examination

The body is that of a normally-built young male measuring 6'0" in height with a moderate degree of jaundice. A central abdominal incision is present at the site of peritoneal dialysis. There are no other external marks of violence. All external orifices are normal.

Internal examination

(Please deal with the contents of the CRANIAL, THORACIC and ABDOMINAL Cavities in that order and include the result of any completed HISTOLOGICAL and/or BACTERIOLOGICAL examination).

INTERNAL EXAMINATION. Cranial Cavity. The scalp, skull, meninges, cerebral arteries and pituitary are normal. The brain weighs 1430g. and has a normal external and cut surface.

Thoracic Cavity. The tongue, pharynx, epiglottis and oesophagus show extensive areas of superficial necrosis and ulceration. The larynx, trachea and main bronchi are normal. The right lung weighs 400g., the left 350g. Both show extensive collapse of all lobes. The cut surfaces show in addition widespread areas of consolidation which are more pronounced in the lower lobes. No pus is present in the smaller bronchi and there is no evidence of abscess formation. The pleural surfaces are smooth, and there is no pleural effusion. The mediastinal lymph nodes are normal. The thymus was not identified. The heart weighs 350g. The pericardium, myocardium, septa, atria, valves, coronary arteries, vena cava and aorta are normal. The thyroid is normal.

Botham, Philip
 Exhibit 47
 6/17/2020

Abdominal Cavity. The mucosa of the stomach shows superficial areas of white thickening and focal ulceration. The duodenum shows hemorrhagic inflammation of the mucosa with superficial ulceration and a little blood is present in the lumen. The remainder of the small intestine and the large intestine are normal. The pancreas shows focal areas of recent hemorrhage. The gall bladder, bile ducts and adrenals are normal. The spleen weighs 120g. and is rather soft. The liver weighs 2100g. and shows centrilobular greenish mottling. The kidneys each weigh 180g. Both show oedema and pallor of the cortex. The ureters, bladder and prostate are normal. The peritoneum is normal and there is no effusion.

Bacteriology. A swab taken from the lung at postmortem showed no significant growth of organism on culture.

Conclusions

The patient presented with jaundice and renal failure and then developed disease in the lungs resulting in his death from respiratory failure. The gross appearances of the organs at autopsy are consistent with a pathological diagnosis of paraquat ingestion. Portions of lung, liver, heart and kidney have been sent for toxicological analysis and also specimens of urine obtained during life. Further histological preparations are being made of tissues taken at autopsy and a separate report will be issued on the microscopic findings.

In my opinion the cause of death was :-

- | | |
|--|-----------------------------------|
| 1. Disease or condition directly leading to death ... | 1. (a) <u>Respiratory failure</u> |
| Antecedent causes ... | due to or as a consequence of |
| Morbid conditions, if any, giving rise to the above cause stating the underlying condition last ... | (b) <u>Pulmonary fibrosis</u> |
| | due to or as a consequence of |
| 2. Other significant conditions contributing to the death but not related to the disease or condition causing it ... | (c) <u>Paraquat ingestion.</u> |

Is any, or any further, Histological or Bacteriological examination to be done ?

Signature [Signature] Qualifications M.D., M.R.C.P., M.B.C. (Path.)

16/76

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HISTOLOGY.

Brain The general architecture of the brain is normal, and there are no inflammatory changes. The blood vessels are normal. Degenerative changes are present in the cells of the substantia nigra and the Purkinje cells of the cerebellum.

Heart Focal areas of recent myocardial degeneration are present, but without any inflammatory reaction.

Lung The alveolar lining cells show extensive damage, and there is some fibrinous exudate and a considerable amount of collagen present in the alveolar spaces with consequent extreme thickening of the alveolar wall. The bronchi contain an acute inflammatory exudate, but there is no generalised bronchopneumonia. The changes are present diffusely throughout both lungs, but tend to be more severe in the lower lobes. The pleurae are normal. The trachea shows epithelial degeneration and early squamous metaplasia.

Liver The liver shows extensive centrilobular necrosis with cholestatic bile retention in the small canaliculi. The portal tracts are normal, and there is no evidence of large bile duct obstruction.

Spleen Normal.

Kidney Acute tubular necrosis, largely affecting the proximal convoluted tubules. The glomeruli, blood vessels and interstitium are normal.

Prostate Normal.

Thyroid Normal.

Pancreas There are focal areas of degeneration of the pancreatic acinar cells, but no significant inflammatory response.

Stomach Focal ulceration of the epithelium with underlying acute inflammation. The fibrinous exudate shows monilial hyphae, but there is no deep fungal invasion.

Esophagus Extensive ulceration of the epithelium with acute inflammation.

Small Intestine Total loss of epithelium in some areas with acute inflammation extending into the underlying muscle.

Large Intestine Extensive loss of mucosa with considerable fibrosis of the submucosa.

Small Intestine Normal.

Small Intestine Autolytic changes only.

Continued

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HISTOLOGY continued.

SUMMARY.

The gross and microscopic findings in this case are consistent with those found following the ingestion of paraquat. The lungs show extensive degeneration of the alveolar lining cells with intra-alveolar fibrosis. This gravely diminished the capacity of the lungs to undertake gas exchange and during life the oxygen tension in the blood reached very low levels. This degree of anoxia probably produced the degenerative changes in the brain. The degenerative changes in the liver, kidney and pancreas are probably due to a direct toxic effect and were all potentially recoverable. Extensive corrosive lesions were present in the tongue, nasopharynx, oesophagus and stomach with underlying acute inflammation.

Dr. L. Henry