Path, QLD - Sunshine Coast University Hosp
at Doherty Street
Nambour 4560
ph: [redacted]
fax

Patient Location	Mortuary (SCUH)	**UR No**	ORR292964 **Sex** M
Consultant	Dettrick, A	**Name**	HANSEN
This report to:	**Dr Michael Sean McManus**	**Given Name**	Peter
	Mackay Hospital	**DOB**	06-Oct-1950
	475 Bridge Road	**Patient Address**	[redacted]
	Mackay QLD 4740		

Collected: 21:30 06-Oct-21 **Lab No** 20529-13033 **PM No**

Autopsy Report

Autopsy No:

SC21A41 HANSEN Peter ORR292964

Date of Admission: 04/10/2021

Date and time of Death: 06/10/2021 at 2130

Date and time of Autopsy: 19/10/2021 at 0800

Pathology Registrar: Dr Alyona Dziouba

Supervising Pathologist: Dr Andrew Dettrick

Mortuary technician: Krissy Wallace
(Medical students in attendance)

HISTORY

Peter HANSEN (URN MKH 235572) is a 70 year old male born on the 06/10/1950.

The patient was referred from Proserpine Hospital to Mackay Base Hospital (MKH) for severe community acquired pneumonia with possible underlying interstitial lung disease and type 1 respiratory failure. He had been unwell for 3 weeks with progressive shortness of breath. His partner reported reduction in exercise tolerance over the years. The patient had been initially treated with ceftriaxone and doxycycline at Proserpine Hospital however continued to deteriorate with increased oxygen requirements. Following admission to MKH, a CT pulmonary angiogram was performed (4/10/2021) to exclude a pulmonary embolus (PE) which showed no evidence of a PE however showed cystic lung disease, with thin walls and an upper zone predominance. Multiple paratracheal, mediastinal and hilar lymph nodes were also noted with the largest measuring 20mm (reactive vs. neoplastic vs. granulomatous). The patient continued to deteriorate on admission, and a decision was made to proceed to intubation and ventilation on the 4/10/2021. The patient was subsequently reviewed by the respiratory team, who felt that the patient would be unlikely to respond to steroids given the degree of fibrosis on imaging and following discussion with the family, a palliative route of care was initiated. The patient died on the 6/10/2021. The patient's family have requested that his body be submitted for autopsy.

Past Medical History:
- Hypertension
- Type 2 diabetes mellitus
- COPD
- E-cigarette user; Ex-traditional smoker - quit 10 years ago, 40 pack year

ANATOMICAL PATHOLOGY

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history
- Ex-heavy alcohol use

Salient antemortem pathology results:
Hb 145, WCC 19.7, neuts 16.86
Blood cultures x 4:
- Positive for S. epidermis (1 of 2 bottles at 40 hrs) (likely contaminant)
- Positive for S. capitis (1 of 2 bottles at 89.7 hrs) (likely contaminant)
- 2 x negative at Proserpine

CRP 172
M. pneumoniae Ab 80, L. pneumophila 1 and 2 < 64
Urine MCS, L. pneumophila and S. pneumonia antigen negative
COVID and respiratory PCR viral panel negative

Medical Certificate Cause of Death:
1a: Severe interstitial lung disease (months to years)
2: Smoking (years)

Consent is granted for a full autopsy.

EXTERNAL EXAMINATION
Identifying features:
There is a hospital identification tag on the left wrist.

Physical characteristics:
Height 176cm, Weight 96kgs. (BMI 31)

The body is that of an adult Caucasian male showing an appearance consistent with the stated age. The build is large. The hair is short and brown/grey in the usual male pattern. The external ears and nose are unremarkable. The lips and mouth are unremarkable.

External examination reveals a white area of possible scar at the left upper thigh. There is a dry, patchy rash over the left anterior shin. There is mild central oedema. There are no congenital or acquired deformities.

Signs of Post mortem change:
There is post mortem hypostasis distributed over the posterior surface of the body. Rigor mortis is absent. There is no evidence of decomposition.

Signs of recent therapy:
There are some signs of venepuncture over the right and left arm near the antecubital fossae. There are signs of attempted vascular access at the right anterior neck and left wrist. There is a dressing over the sacral area, however no skin changes are present underneath the dressing.

ANATOMICAL PATHOLOGY

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Fax

Pathology Queensland (NATA/RCPA Corporate Accreditation Number 2539)
Health Support Queensland

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Signs of recent injury:
There are no signs of recent injury.

INTERNAL EXAMINATION

Cardiovascular System
The heart is slightly large and floppy; it weighs 450g (expected = up to 430g by body weight). The pericardium is normal and there is a small clear serous pericardial effusion. The heart comprises 4 chambers in the usual sequence and is normally sited. No thrombi or emboli are noted anywhere within the cardiovascular system.

The right atrium is not dilated and receives the superior and inferior caval veins. The right atrial appendage is normal and does not contain any thrombus. The oval fossa is normal and no interatrial septal defects are noted. The tricuspid valve is normal, composed of 3 leaflets and has a circumference of 135 mm. The tricuspid valve drains to the right ventricle. The right ventricle is not dilated, the right ventricular free wall measures 5 mm in thickness and the right ventricular outflow tract is muscular. The pulmonary valve comprises 3 leaflets and has a circumference of 100 mm. The pulmonary trunk and the right and left pulmonary arteries are normal.

The left atrium is not dilated and receives 4 normal pulmonary veins. The left atrial appendage is normal and does not contain any thrombus. The mitral valve is composed of 2 leaflets and has a circumference of 125 mm. The mitral valve leaflets appear normal and no hooding or regurgitation is noted. The mitral valve drains to the left ventricle. The left ventricle shows possible dilatation. The left ventricular free wall thickness is 16mm. The myocardium is uniform with no sign of acute ischaemia. The interventricular septum is 14 mm thick. There is a cream-yellow 8 mm lesion, possibly representing scar tissue, located at the posterior interventricular septum. No ventricular septal defect is noted. The left ventricular outflow tract is partially membranous. The aortic valve is composed of 3 normal leaflets and measures 92 mm circumference.

There is significant coronary artery atherosclerosis present within all 3 coronary arteries, as follows: right coronary 30% stenosis, left anterior descending 40% stenosis, left circumflex up to 60% stenosis. The left coronary artery is dominant. No thrombus is seen.

The thoracic aorta and its branches show mild uncomplicated atheroma. The abdominal aorta shows mild uncomplicated atheroma. The superior and inferior caval veins are normal. The portal vein is normal with no evidence of thrombosis.

Respiratory System

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Both lungs are red, solid, airless and heavy; the right lung weighs 1140g (expected = 450g) and the left lung 990g (expected = 400g). There are moderate bilateral pleural effusions comprising of 225mL haemoserous fluid. The external surface of the lungs shows prominent carbon pigment in a net-like pattern. There is are a few 2cm bullae located at the diaphragmatic surface of the left lower lobe.

The cut surfaces of the lungs show congestion, oedema, haemorrhage, fibrosis and cystic lesions. These changes diffusely affect both lungs. The cysts are most prominent in the lower zones of the upper lobes, bilaterally. No convincing consolidation is seen. (The tissue is showing considereble post-mortem autolysis.)

Peribronchial and hilar lymph nodes appear slightly enlarged. The pulmonary arteries show no sign of thromboembolus.

The trachea and main bronchi appear normal. The mucosa of the upper airways appears red and oedematous.

Gastrointestinal System
There is no ascites noted. The oesophagus and gastro-oesophageal junction appear normal. The stomach contains food material and the mucosa appears normal. No ulceration is seen. The mucosa within the duodenum appears normal. The small and large bowels have not been opened but have a normal external surface.

Hepatobiliary System
The liver weighs 1750g (expected = up to 1600g) and shows normal lobation. The liver has a normal shape. The cut surface appears slightly yellow. No masses or focal lesions are seen in the liver. There is no macroscopic evidence of steatosis or cirrhosis. The gall bladder is present and drains green bile. No cholelithiasis is noted. The pancreas appears normal along its entire length and there is no evidence of pancreatitis or other mass lesions.

Urogenital System
The right kidney weighs 190 grams and the left kidney weighs 210 grams. Both kidneys are normal weight and have normal appearance externally. The cut surfaces show normal corticomedullary pattern. No focal lesions are seen. The pelvicalyceal system and ureters are normal. The bladder and testes in the correction anatomical locations (but had not been further examined).

Endocrine System
The thyroid appears diffusely enlarged and weighs 30g. On cut section no focal lesions are identified. The adrenal glands appear normal and one adrenal gland (laterality uncertain due to autopsy processing) appears to have a well circumscribed 5mm yellow lesion which has been sampled for microscopy. The

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pituitary is not examined.

Haematopoietic System
The spleen has a normal shape and location but is slightly large, at 230g (expected = up to 150g). The perihilar and mediastinal lymph nodes appear slightly enlarged. A very large subcarinal node is noted and sampled for histology. The cut surface is uniform.

Musculoskeletal system
The musculoskeletal system has not been extensively examined and appears grossly normal.

Central Nervous System
The brain has not been examined.

Block Key
1A-C LUL; 1D L lingula; 1E-F LLL; 1G-H RUL; 1I-J RML; 1K-L RLL; 1M thyroid; 1N-P liver; 1Q spleen; 1R-U Adrenal (R is one side); 1V subcarinal lymph node; 1W-X kidney; 1Y pancreas; 1Z Left circumflex artery; 1AA Left anterior descending artery; 1AB LV anterior wall; 1AC LV lateral; 1AD LV posterior wall; 1AE RV free wall; 1AF IVS; 1AG posterior IVS with possible scar.

PROVISIONAL MACROSCOPIC FINDINGS
Pulmonary fibrosis with a diffuse cystic, haemorrhagic pattern
Pulmonary oedema
Pleural effusions
Perihilar lymphadenopathy
Mildly dilated left heart
Possible myocardial scar
Possible adrenal cortical adenoma
Yellow liver
Goitre
Splenomegaly (mild)

Registrar: Dr A Dzlouba
Pathologist: Dr A Dettrick
Pathology Queensland
Reported 19 October 2021

MICROSCOPIC
There is moderate autolysis of all tissues, consistent with the long period of time between the death and the autopsy. This does limit the histological assessment to some extent.

Cardiovascular system:

ANATOMICAL PATHOLOGY